

TABLES

TABLE 1-1**CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN****BAS CONSULTANT TEAM MEMBERS**

COMPANY	TEAM MEMBER
Bryan A. Stirrat & Associates (BAS)	Bryan A. Stirrat, P.E.
	Christine M. Arbogast, P.E.
	Cesar A. Leon
Clements Environmental (Clements)	Chip Clements, P.E.
	Carrie Schneider
HF&H Consultants (HF&H)	Robert D. Hilton, CMC
	Marva Sheehan
J.R. Miller & Associates (JRMA)	Doug Drennen
Katz & Associates	Lewis Michaelson
	Kelly Thomas Jarosz

TABLE 1-2

**CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN**

RESOURCE MANAGEMENT ADVISORY COMMITTEE (RMAC) MEMBERS

MEMBER NAME	AFFILIATION
Mike MaDade	San Diego County Disposal Association
Lynn France	Integrated Waste Management Technical Advisory Committee
Richard Anthony	Integrated Waste Management Citizens Advisory Committee
Alan Pentico	San Diego County Apartment Association
Amy Harris	San Diego County Taxpayers Association
Leslie L. McLaughlin	Department of Navy, Southwest Division
Jacquie Adams	Solid Waste Local Enforcement Agency
Beryl Flom	League of Women Voters & Council Member Fry's Nominee
Fatih Buyuksonmez, PH.D., P.E.	San Diego State University - Dept of Civil & Environmental Studies
Jamie Fox Rice	Council District 2 Representative
Barbara Lamb	City of San Diego, Business Office
Andrea M. Eaton	Council District Nominee
Sylvia M. Castillo, P.E.	City of San Diego, Environmental Services Department
Brian Henry	City of San Diego, Environmental Services Department
Robert "Bob" Epler	City of San Diego, Environmental Services Department

TABLE 2-1

CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN

POPULATION PROJECTIONS TO 2045

Population Projections																		
JURISDICTION	Population																	
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Carlsbad	97,853	98,922	99,991	101,061	102,130	103,200	104,272	105,348	106,426	107,506	108,587	109,818	111,051	112,287	113,524	114,758	115,986	117,207
Chula Vista	220,286	222,693	225,100	227,508	229,916	232,324	234,737	237,158	239,586	242,018	244,451	247,222	249,999	252,781	255,564	258,342	261,107	263,857
Coronado	28,071	28,377	28,684	28,991	29,298	29,605	29,912	30,221	30,530	30,840	31,150	31,503	31,857	32,211	32,566	32,920	33,272	33,623
Del Mar	4,796	4,848	4,901	4,953	5,005	5,058	5,110	5,163	5,216	5,269	5,322	5,382	5,443	5,503	5,564	5,624	5,684	5,744
El Cajon	103,104	104,231	105,358	106,485	107,612	108,739	109,868	111,002	112,138	113,276	114,415	115,712	117,012	118,314	119,616	120,917	122,211	123,498
Encinitas	65,939	66,659	67,380	68,100	68,821	69,542	70,264	70,989	71,716	72,444	73,172	74,001	74,833	75,665	76,498	77,330	78,157	78,981
Escondido	148,136	149,755	151,373	152,993	154,612	156,231	157,854	159,482	161,115	162,750	164,387	166,250	168,117	169,988	171,860	173,728	175,587	177,437
Imperial Beach	29,346	29,666	29,987	30,308	30,629	30,949	31,271	31,593	31,917	32,241	32,565	32,934	33,304	33,675	34,045	34,416	34,784	35,150
La Mesa	59,123	59,769	60,415	61,062	61,708	62,354	63,002	63,652	64,303	64,956	65,609	66,353	67,098	67,845	68,592	69,337	70,079	70,818
Lemon Grove	27,014	27,309	27,604	27,900	28,195	28,490	28,786	29,083	29,381	29,679	29,977	30,317	30,658	30,999	31,340	31,681	32,020	32,357
National City	59,135	59,781	60,427	61,074	61,720	62,366	63,014	63,664	64,316	64,969	65,622	66,366	67,111	67,858	68,605	69,351	70,093	70,831
Oceanside	182,484	184,479	186,473	188,467	190,462	192,457	194,456	196,462	198,473	200,487	202,503	204,798	207,099	209,404	211,709	214,010	216,300	218,579
Poway	53,346	53,929	54,512	55,095	55,678	56,261	56,845	57,432	58,020	58,609	59,198	59,869	60,541	61,215	61,889	62,562	63,231	63,897
San Diego	1,367,210	1,382,152	1,397,090	1,412,035	1,426,981	1,441,924	1,456,904	1,471,930	1,487,000	1,502,091	1,517,193	1,534,389	1,551,625	1,568,894	1,586,167	1,603,408	1,620,565	1,637,638
San Diego-Unincorporated	493,753	499,149	504,544	509,941	515,338	520,735	526,145	531,571	537,013	542,463	547,918	554,128	560,352	566,589	572,826	579,053	585,249	591,415
San Marcos	70,570	71,341	72,112	72,883	73,655	74,426	75,199	75,975	76,753	77,532	78,311	79,199	80,088	80,980	81,871	82,761	83,647	84,528
Santee	57,093	57,717	58,341	58,965	59,589	60,213	60,839	61,466	62,096	62,726	63,356	64,074	64,794	65,515	66,237	66,957	67,673	68,386
Solana Beach	14,141	14,296	14,450	14,605	14,760	14,914	15,069	15,225	15,380	15,536	15,693	15,871	16,049	16,227	16,406	16,584	16,762	16,938
Vista	99,262	100,347	101,431	102,516	103,601	104,686	105,774	106,865	107,959	109,054	110,151	111,399	112,651	113,905	115,159	116,410	117,656	118,895
TOTAL	3,180,661	3,215,421	3,250,173	3,284,942	3,319,711	3,354,474	3,389,324	3,424,279	3,459,338	3,494,445	3,529,580	3,569,583	3,609,682	3,649,857	3,690,038	3,730,148	3,770,063	3,809,780

PERCENT GROWTH	0.96%	1.09%	1.08%	1.07%	1.06%	1.05%	1.04%	1.03%	1.02%	1.01%	1.01%	1.13%	1.12%	1.11%	1.10%	1.09%	1.07%	1.05%
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JURISDICTION	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Carlsbad	118,421	119,626	120,821	121,764	122,693	123,610	124,514	125,406	126,285	127,155	128,015	128,866	129,709	130,544	131,372	132,195	133,013	133,827
Chula Vista	266,590	269,303	271,992	274,116	276,208	278,271	280,307	282,314	284,293	286,250	288,187	290,104	292,002	293,881	295,745	297,597	299,438	301,271
Coronado	33,971	34,317	34,659	34,930	35,197	35,459	35,719	35,975	36,227	36,476	36,723	36,967	37,209	37,449	37,686	37,922	38,157	38,390
Del Mar	5,804	5,863	5,921	5,968	6,013	6,058	6,102	6,146	6,189	6,232	6,274	6,316	6,357	6,398	6,439	6,479	6,519	6,559
El Cajon	124,777	126,047	127,306	128,299	129,278	130,244	131,197	132,137	133,063	133,979	134,886	135,783	136,671	137,550	138,423	139,290	140,152	141,009
Encinitas	79,799	80,611	81,416	82,051	82,678	83,295	83,905	84,506	85,098	85,684	86,263	86,837	87,405	87,968	88,526	89,080	89,631	90,180
Escondido	179,274	181,099	182,907	184,335	185,742	187,129	188,498	189,848	191,179	192,495	193,798	195,087	196,363	197,626	198,880	200,126	201,364	202,596
Imperial Beach	35,514	35,876	36,234	36,517	36,795	37,070	37,342	37,609	37,873	38,133	38,391	38,647	38,900	39,150	39,398	39,645	39,890	40,134
La Mesa	71,551	72,279	73,001	73,571	74,132	74,686	75,232	75,771	76,302	76,828	77,348	77,862	78,371	78,876	79,376	79,873	80,367	80,859
Lemon Grove	32,692	33,025	33,355	33,615	33,872	34,125	34,374	34,620	34,863	35,103	35,341	35,576	35,808	36,039	36,268	36,495	36,720	36,945
National City	71,565	72,293	73,015	73,585	74,147	74,701	75,247	75,786	76,317	76,843	77,363	77,877	78,387	78,891	79,392	79,889	80,383	80,875
Oceanside	220,843	223,090	225,318	227,077	228,810	230,519	232,206	233,869	235,508	237,129	238,734	240,322	241,894	243,450	244,995	246,529	248,054	249,572
Poway	64,559	65,216	65,867	66,382	66,888	67,388	67,881	68,367	68,846	69,320	69,789	70,253	70,713	71,168	71,620	72,068	72,514	72,958
San Diego	1,654,600	1,671,437	1,688,129	1,701,306	1,714,289	1,727,094	1,739,731	1,752,190	1,764,474	1,776,621	1,788,641	1,800,538	1,812,318	1,823,978	1,835,552	1,847,046	1,858,472	1,869,844
San Diego-Unincorporated	597,540	603,621	609,649	614,408	619,097	623,721	628,284	632,784	637,220	641,607	645,948	650,244	654,499	658,709	662,889	667,040	671,167	675,274
San Marcos	85,403	86,272	87,134	87,814	88,484	89,145	89,798	90,441	91,075	91,702	92,322	92,936	93,544	94,146	94,743	95,337	95,926	96,513
Santee	69,094	69,797	70,495	71,045	71,587	72,122	72,649	73,170	73,683	74,190	74,692	75,189	75,681	76,167	76,651	77,131	77,608	78,083
Solana Beach	17,114	17,288	17,461	17,597	17,731	17,864	17,994	18,123	18,250	18,376	18,500	18,623	18,745	18,866	18,986	19,104	19,223	19,340
Vista	120,127	121,349	122,561	123,518	124,460	125,390	126,308	127,212	128,104	128,986	129,859	130,722	131,578	132,424	133,264	134,099	134,928	135,754
TOTAL	3,849,241	3,888,409	3,927,242	3,957,898	3,988,101	4,017,891	4,047,288	4,076,274	4,104,849	4,133,108	4,161,073	4,188,749	4,216,154	4,243,280	4,270,206	4,296,945	4,323,527	4,349,983

PERCENT GROWTH	1.04%	1.02%	1.00%	0.78%	0.76%	0.75%	0.73%	0.72%	0.70%	0.69%	0.68%	0.67%	0.65%	0.64%	0.63%	0.63%	0.62%	0.61%
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Source: State of California Department of Finance Population Projections for San Diego County 2008

TABLE 2-2

CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN

COUNTYWIDE SOLID WASTE
TONNAGE PROJECTIONS TO 2045

Jurisdiction	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Carlsbad	109,926	111,552	113,588	114,946	115,059	113,362	114,536	115,716	116,900	118,085	119,272	120,624	121,979	123,336	124,694	126,050	127,398	128,741
Chula Vista	158,384	160,795	163,730	165,687	165,850	163,404	165,090	166,790	168,495	170,202	171,912	173,860	175,814	177,770	179,727	181,681	183,625	185,559
Coronado	44,171	46,299	47,145	47,708	47,755	47,051	47,407	47,862	48,317	48,773	49,254	49,812	50,372	50,932	51,493	52,053	52,610	53,164
Del Mar	8,672	8,929	9,092	9,201	9,210	9,074	9,157	9,248	9,340	9,432	9,526	9,633	9,742	9,850	9,959	10,067	10,175	10,282
El Cajon	90,052	91,392	93,060	94,172	94,265	92,875	95,472	96,455	97,442	98,430	99,419	100,545	101,674	102,805	103,937	105,067	106,191	107,310
Encinitas	62,334	63,262	64,417	65,187	65,251	64,289	64,954	65,623	66,294	66,966	67,640	68,406	69,175	69,944	70,714	71,483	72,248	73,009
Escondido	141,339	143,404	146,022	147,767	147,913	145,731	148,398	149,927	151,462	152,998	154,536	156,287	158,042	159,801	161,560	163,316	165,064	166,803
Imperial Beach	12,857	13,056	13,294	13,453	13,466	13,267	13,404	13,542	13,680	13,819	13,958	14,116	14,275	14,433	14,592	14,751	14,909	15,066
La Mesa	35,259	35,791	36,445	36,880	36,917	36,372	36,748	37,126	37,506	37,886	38,267	38,700	39,135	39,571	40,006	40,441	40,874	41,305
Lemon Grove	18,503	18,781	19,124	19,353	19,372	19,086	19,283	19,482	19,681	19,881	20,081	20,308	20,536	20,765	20,993	21,222	21,449	21,675
National City	51,574	52,782	53,746	54,388	54,442	53,639	54,155	54,703	55,252	55,802	56,360	56,999	57,639	58,281	58,922	59,563	60,200	60,834
Oceanside	37,138	37,691	38,379	38,838	38,876	38,303	38,658	39,139	39,624	40,112	40,601	41,096	41,595	42,094	42,593	43,092	43,591	44,090
Poway	53,078	53,918	54,902	55,558	55,613	54,793	55,355	55,924	56,495	57,067	57,640	58,213	58,786	59,359	59,932	60,505	61,078	61,651
San Diego	1,429,064	1,507,784	1,535,309	1,553,660	1,555,189	1,532,251	1,546,103	1,560,726	1,575,365	1,590,014	1,605,622	1,622,069	1,640,291	1,658,547	1,676,806	1,695,032	1,713,170	1,731,218
San Diego-Unincorporated	440,220	446,730	454,886	460,322	460,776	453,979	493,986	499,076	504,182	509,295	514,415	520,240	526,081	531,937	537,793	543,638	549,456	555,244
San Marcos	80,485	81,649	83,140	84,133	84,216	82,974	84,927	85,803	86,682	87,561	88,441	89,444	90,448	91,455	92,462	93,467	94,467	95,462
Santee	44,559	45,221	46,047	46,597	46,643	45,955	47,793	48,286	48,779	49,274	49,769	50,333	50,898	51,464	52,031	52,597	53,159	53,719
Solana Beach	14,042	14,263	14,524	14,697	14,712	14,495	14,644	14,794	14,945	15,097	15,248	15,421	15,594	15,768	15,941	16,115	16,287	16,459
Vista	87,941	89,215	90,843	91,929	92,019	90,662	96,208	97,200	98,195	99,192	100,189	101,324	102,463	103,603	104,743	105,882	107,015	108,142
TOTAL	2,919,599	3,022,515	3,077,693	3,114,478	3,117,544	3,071,562	3,251,277	3,283,423	3,315,637	3,347,884	3,381,149	3,417,711	3,456,100	3,494,565	3,533,037	3,571,440	3,609,657	3,647,684

Jurisdiction	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Carlsbad	130,074	131,398	132,710	133,746	134,766	135,773	136,767	137,746	138,712	139,667	140,612	141,547	142,473	143,389	144,299	145,203	146,101	146,995
Chula Vista	187,481	189,389	191,281	192,774	194,245	195,696	197,128	198,539	199,931	201,308	202,670	204,018	205,352	206,674	207,985	209,287	210,582	211,871
Coronado	53,715	54,261	54,803	55,231	55,653	56,068	56,479	56,883	57,282	57,676	58,066	58,453	58,835	59,213	59,589	59,962	60,333	60,703
Del Mar	10,388	10,494	10,599	10,681	10,763	10,843	10,923	11,001	11,078	11,154	11,230	11,304	11,378	11,452	11,524	11,596	11,668	11,740
El Cajon	108,421	109,525	110,618	111,482	112,333	113,172	114,000	114,816	115,621	116,417	117,205	117,984	118,756	119,520	120,279	121,032	121,780	122,526
Encinitas	73,765	74,516	75,260	75,848	76,426	76,997	77,561	78,116	78,664	79,205	79,741	80,272	80,797	81,317	81,833	82,345	82,854	83,361
Escondido	168,531	170,245	171,946	173,288	174,610	175,914	177,202	178,471	179,722	180,959	182,183	183,395	184,595	185,783	186,962	188,132	189,296	190,454
Imperial Beach	15,222	15,377	15,530	15,652	15,771	15,889	16,005	16,120	16,233	16,344	16,455	16,564	16,673	16,780	16,887	16,992	17,097	17,202
La Mesa	41,732	42,157	42,578	42,910	43,238	43,561	43,880	44,194	44,504	44,810	45,113	45,413	45,710	46,004	46,296	46,586	46,874	47,161
Lemon Grove	21,899	22,122	22,343	22,517	22,689	22,859	23,026	23,191	23,353	23,514	23,673	23,831	23,987	24,141	24,294	24,446	24,597	24,748
National City	61,464	62,090	62,710	63,199	63,682	64,157	64,627	65,090	65,546	65,997	66,444	66,886	67,323	67,756	68,186	68,613	69,038	69,460
Oceanside	163,149	164,809	166,455	167,754	169,035	170,297	171,543	172,772	173,983	175,181	176,366	177,539	178,700	179,850	180,991	182,125	183,251	184,373
Poway	62,860	63,500	64,134	64,635	65,128	65,615	66,095	66,568	67,035	67,496	67,953	68,405	68,852	69,295	69,735	70,172	70,606	71,038
San Diego	1,749,150	1,766,948	1,784,594	1,798,525	1,812,250	1,825,787	1,839,145	1,852,316	1,865,302	1,878,143	1,890,850	1,903,427	1,915,880	1,928,206	1,940,442	1,952,593	1,964,672	1,976,694
San Diego-Unincorporated	560,995	566,704	572,363	576,831	581,233	585,575	589,859	594,083	598,248	602,366	606,442	610,476	614,470	618,423	622,347	626,244	630,118	633,974
San Marcos	96,451	97,432	98,406	99,174	99,930	100,677	101,414	102,140	102,856	103,564	104,265	104,958	105,645	106,325	106,999	107,669	108,335	108,998
Santee	54,276	54,828	55,376	55,808	56,234	56,654	57,068	57,477	57,880	58,278	58,673	59,063	59,449	59,832	60,212	60,589	60,963	61,336
Solana Beach	16,629	16,798	16,966	17,099	17,229	17,358	17,485	17,610	17,734	17,856	17,976	18,096	18,214	18,332	18,448	18,563	18,678	18,793
Vista	109,262	110,374	111,477	112,347	113,204	114,050	114,884	115,707	116,518	117,320	118,114	118,900	119,677	120,447	121,212	121,971	122,725	123,476
TOTAL	3,685,466	3,722,968	3,760,148	3,789,500	3,818,419	3,846,941	3,875,087	3,902,839	3,930,199	3,957,256	3,984,030	4,010,529	4,036,768	4,062,739	4,088,521	4,114,122	4,139,573	4,164,903

TABLE 2-3

**CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN**

FY 2009 DISPOSAL TONNAGE TO SAN DIEGO LANDFILLS BY JURISDICTION

Tonnage of Each Jurisdiction's SW in Each Landfill (FY 2009)						
Origin of Waste In County (tons for 2009)	Borrego	Otay	Ramona	Sycamore	West Miramar	Sum
Carlsbad	-	111,269	-	3,058	665	114,992
Chula Vista	-	163,190	-	464	2,029	165,683
Coronado	-	22,583	-	226	23,397	46,206
Del Mar	-	323	-	6,674	2,075	9,072
El Cajon	-	87,939	-	5,603	661	94,202
Encinitas	-	25,878	-	38,852	476	65,207
Escondido	-	2,315	507	144,561	469	147,852
Imperial Beach	-	13,235	-	11	205	13,450
La Mesa	-	34,493	-	2,006	385	36,884
Lemon Grove	-	18,862	-	306	187	19,356
National City	-	46,387	-	272	7,292	53,951
Oceanside	-	32,170	-	6,399	281	38,850
Out of State	-	-	-	-	-	-
Poway	-	2,717	17,904	33,731	1,173	55,524
San Diego	-	411,635	-	172,011	911,275	1,494,920
San Diego-Unincorporated	7,728	218,047	47,098	184,980	114	457,968
San Marcos	-	1,700	-	82,420	74	84,194
Santee	-	36,517	-	9,780	316	46,613
Solana Beach	-	9,030	-	5,358	301	14,689
Vista	-	6,823	-	85,056	2,653	94,532
Subtotal (In County)	7,728	1,245,113	65,509	781,767	954,028	3,054,145

Outside County (tons for 2009)	Borrego	Otay	Ramona	Sycamore	West Miramar	Sum
Barona			2,247	1,155		3,402
Campo				233		233
Canyon Lake				112		112
Calameza				68		68
Cherry Valley				23		23
Cathedral City				876		876
Cochella				299		299
Hemet				125		125
Indian Nations (Unspecified)		51	814	6,764		7,629
Indian Wells				197		197
Indio				1,221		1,221
Imperial - Unincorporated				1		1
Golden Acorn		165				165
La Quinta				828		828
Lake Elsinore				275		275
Los Angeles		1,113	52			1,165
Los Angeles County - Unincorporated						-
Mexico		2,931				2,931
Murietta				3		3
Ontario				20		20
Orange County		5,770				5,770
Palm Springs				3		3
Palm Desert				1,618		1,618
Pala		27		207		235
Perris				217		217
Rancho Mirage				519		519
Rincon				236		236
Riverside		17,945		769		18,714
Riverside - Unincorporated						-
San Bernardino		14		3,106		3,120
San Bernardino - Unincorporated						-
San Jacinto				116		116
Sycuan		1,842		598		2,440
Temecula				766		766
29 Palms				175		175
Viejas		2,174		438		2,612
Yucca Valley				225		225
Subtotal (Outside County)	0	32,033	3,112	21,191	-	56,337
TOTAL	7,728	1,277,146	68,621	802,958	954,028	3,110,481

Sources: CIWMB, Jurisdiction Profile
 CIWMB, Origin of Waste by Landfill

TABLE 2-4

**CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN**

LANDFILL ACCEPTANCE OF SOLID WASTE BY JURISDICTION

Percentage of Each Jurisdiction's SW by Landfill (FY 2009)						
Origin of Waste In County (tons for 2006)	Borrego	Otay	Ramona	Sycamore Sanitary	West Miramar Sanitary	Sum
Carlsbad		96.76%		2.66%	0.58%	100%
Chula Vista		98.50%		0.28%	1.22%	100%
Coronado		48.87%		0.49%	50.64%	100%
Del Mar		3.56%	0.00%	73.57%	22.87%	100%
El Cajon		93.35%	0.000%	5.95%	0.70%	100%
Encinitas		39.69%	0.000%	59.58%	0.73%	100%
Escondido		1.57%	0.343%	97.77%	0.32%	100%
Imperial Beach		98.40%		0.08%	1.52%	100%
La Mesa		93.52%		5.44%	1.04%	100%
Lemon Grove		97.45%		1.58%	0.97%	100%
National City		85.98%		0.50%	13.52%	100%
Oceanside		82.81%	0.000%	16.47%	0.72%	100%
Poway		4.89%	32.24%	60.75%	2.11%	100%
San Diego		27.54%		11.51%	60.96%	100%
San Diego-Unincorporated	1.69%	47.61%	10.28%	40.39%	0.02%	100%
San Marcos		2.02%		97.89%	0.09%	100%
Santee		78.34%		20.98%	0.68%	100%
Solana Beach		61.48%		36.48%	2.05%	100%
Vista		7.22%		89.98%	2.81%	100%

NOTE: Values Calculated from Table 2-3

TABLE 2-5

CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN

PERCENTAGE OF LANDFILL ACCEPTANCE OF SOLID WASTE BY JURISDICTION

Percentage of Each Landfill's SW by Jurisdiction (FY 2009)					
Origin of Waste In County (tons for 2009)	Borrego	Otay	Ramona	Sycamore Sanitary	West Miramar Sanitary
Carlsbad		8.71%	0.00%	0.38%	0.07%
Chula Vista		12.78%	0.00%	0.06%	0.21%
Coronado		1.77%	0.00%	0.03%	2.45%
Del Mar		0.03%	0.00%	0.83%	0.22%
El Cajon		6.89%	0.00%	0.70%	0.07%
Encinitas		2.03%	0.00%	4.84%	0.05%
Escondido		0.18%	0.74%	18.00%	0.05%
Imperial Beach		1.04%	0.00%	0.00%	0.02%
La Mesa		2.70%	0.00%	0.25%	0.04%
Lemon Grove		1.48%	0.00%	0.04%	0.02%
National City		3.63%	0.00%	0.03%	0.76%
Oceanside		2.52%	0.00%	0.80%	0.03%
Out of State		0.00%	0.00%	0.00%	
Poway		0.21%	26.09%	4.20%	0.12%
San Diego		32.23%	0.00%	21.42%	95.52%
San Diego-Unincorporated	100.00%	17.07%	68.64%	23.04%	0.01%
San Marcos		0.13%	0.00%	10.26%	0.01%
Santee		2.86%	0.00%	1.22%	0.03%
Solana Beach		0.71%	0.00%	0.67%	0.03%
Vista		0.53%	0.00%	10.59%	0.28%
Outside County (tons for 2009)					
Barona		0.00%	3.27%	0.14%	
Campo		0.00%	0.00%	0.03%	
Canyon Lake		0.00%	0.00%	0.01%	
Calameza		0.00%	0.00%	0.01%	
Cherry Valley		0.00%	0.00%	0.00%	
Cathedral City		0.00%	0.00%	0.11%	
Cochella		0.00%	0.00%	0.04%	
Hemet		0.00%	0.00%	0.02%	
Indian Nations (Unspecified)		0.00%	1.19%	0.84%	
Indian Wells		0.00%	0.00%	0.02%	
Indio		0.00%	0.00%	0.15%	
Imperial - Unincorporated		0.00%	0.00%	0.00%	
Golden Acorn		0.01%	0.00%	0.00%	
La Quinta		0.00%	0.00%	0.10%	
Lake Elsinore		0.00%	0.00%	0.03%	
Los Angeles		0.09%	0.08%	0.00%	
Los Angeles County - Unincorporated		0.00%	0.00%	0.00%	
Mexico		0.23%	0.00%	0.00%	
Murietta		0.00%	0.00%	0.00%	
Ontario		0.00%	0.00%	0.00%	
Orange County		0.45%	0.00%	0.00%	
Palm Springs		0.00%	0.00%	0.00%	
Palm Desert		0.00%	0.00%	0.20%	
Pala		0.00%	0.00%	0.03%	
Perris		0.00%	0.00%	0.03%	
Rancho Mirage		0.00%	0.00%	0.06%	
Rincon		0.00%	0.00%	0.03%	
Riverside		1.41%	0.00%	0.10%	
Riverside - Unincorporated		0.00%	0.00%	0.00%	
San Bernardino		0.00%	0.00%	0.39%	
San Bernardino - Unincorporated		0.00%	0.00%	0.00%	
San Jacinto		0.00%	0.00%	0.01%	
Sycuan		0.14%	0.00%	0.07%	
Temecula		0.00%	0.00%	0.10%	
29 Palms		0.00%	0.00%	0.02%	
Viejas		0.17%	0.00%	0.05%	
Yucca Valley		0.00%	0.00%	0.03%	
TOTAL	100%	100%	100%	100%	100%

TABLE 2-6

**CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN**

TRANSFER/PROCESSING FACILITIES

Active Large Volume Transfer/Processing Facilities (100 Tons Per Day or Larger)						
Name	Operator	City	Maximum Permitted Throughput (Tons per Day)	Permitted Capacity (Tons per Day)	Annual Total Permitted Capacity	Types of Waste Accepted
EDCO Recovery and Transfer Station	EDCO Disposal Corporation	San Diego	1,500	1,716	535,392	C&D, I, MM
EDCO Construction/Demolition	EDCO Waste and Recycling Svcs.	San Marcos	175	174	54,288	C&D
EDCO Station	EDCO Disposal Corporation	La Mesa	200	462	144,144	C&D, GM, I, MM
EDCO Recycling	EDCO Disposal Corporation	Lemon Grove	516	960	299,520	MM
Escondido Resource Recovery	Jemco Equipment Corporation	Escondido	2,500	3,402	1,061,424	C&D, GM, MM
Fallbrook Recycling Facility	Fallbrook Refuse Service	Fallbrook	500	792	247,104	C&D, MM
Otay CDI MVPF	Otay Landfill, Inc	Chula Vista	174	174	54,288	C&D
Palomar Transfer Station, Inc.	Palomar Transfer Station, Inc.	Carlsbad	800	800	249,600	C&D, GM, I, MM
Ramona MRF & Transfer Station	Jemco Equipment Corporation	Unincorporated	370	405	126,360	C&D, GM, MM
SANCO Recycling	SANCO Services	Escondido	735	960	299,520	MM
SANCO Resource Recovery	SANCO Services	Lemon Grove	1,000	1,000	312,000	C&D
The Allan Company MRF & T/S	Cedar-Young Company, dba Allan Co	San Diego	1,000	1,500	468,000	MM
Universal Refuse Removal	Universal Refuse Removal	El Cajon	1,000	1,000	312,000	MM
			10,470	13,345	4,163,640	

Planned Large Volume Transfer/Processing Facilities						
Name	Operator	City	Maximum Permitted Throughput (Tons per Day)	Permitted Capacity (Tons per Day)	Annual Total Permitted Capacity	Types of Waste Accepted
Miramar Transfer Station	City of San Diego	San Diego	5,000			

Notes: ■ Tons-per-year were converted to tons-per-day using a 312-day year (52 weeks x 6 days/week)
 ■ Cubic yards were converted to tons using 500 lbs./cubic yard

Source: CIWMB, Solid Waste Information System

Other Transfer / Processing Facilities						
Name	Operator	City	Maximum Permitted Throughput (Tons per Day)	Permitted Capacity (Tons per Day)	Annual Total Permitted Capacity	Types of Waste Accepted
Waste Management of No. County	Waste Management of No. County	Oceanside	4,500	4,500		Sealed container transfer operation of waste

C&D - Construction and Demolition
 GM - Green Material
 I - Industrial
 MM - Mixed Municipal

TABLE 2-7
CITY OF SAN DIEGO
LONG-TERM RESOURCES MANAGEMENT OPTIONS STRATEGIC PLAN
COMPOSTING FACILITIES

Existing Composting Facilities (100 Tons per Day or Larger)				
Name	Operator	City	Maximum Permitted Throughput (Tons per Day)	Permitted Capacity (Tons per Day)
Answede Organic Recycling	Answede, Inc.	Chula Vista	200	15
El Corazon Compost Facility	Agri Service	Vista	200	5,000
Evergreen Nursery	Evergreen Distributors, Inc.	San Diego	125	2,500
Oceanside Biosolids	Agri Service	Vista	150	2
Inland Pacific Resource Recovery	Inland Pacific Resource Recovery	Lakeside	450	2,750
Inland Pacific Resource Recovery	Inland Pacific Resource Recovery	Lakeside	400	321
Miramar Greenery	City of San Diego	San Diego	388	192
			1,913	10,780

Planned Composting Facilities				
Name	Operator	City	Maximum Permitted Throughput (Tons per Day)	Permitted Capacity (Tons per Day)
Starstream Valley Center	Starstream Energy LLC	ValleyCenter	200	234

Notes: § Tons-per-year were converted to tons-per-day using a 312-day year (52 weeks x 6 days/week)

§ Cubic yards were converted to tons using 500 lbs./cubic yard

Source: CalRecycle, Solid Waste Information System as of July, 2011

TABLE 2-8

**CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN**

RECYCLABLES PROCESSING CENTERS

	NAME	CITY	MATERIALS	VOLUME
1	Coopers Recycling Center	Alpine		
2	Main Street Recycling	Chula Vista		
3	Mikes Recycling	Chula Vista		
4	EDCO Station Buyback Center	La Mesa	Bottles, cans, plastic bottles	
5	EDCO Recycling	Lemon Grove	Bottles, cans, plastic bottles	
6	A1 Alloys	National City		
7	ABC Metals Inc.	National City		
8	Fibre Resources Unlimited Inc.	Spring Valley	Bottles, cans, plastic bottles, paper, cardboard, metal	
9	Spring Valley Environmental Services Inc.	Spring Valley	Bottles, cans, plastic bottles, copper, brass	
10	Spring Valley Recycling	Spring Valley	Bottles, cans, plastic bottles, brass, copper	
11	Your Neighborhood Recycling Centers	Spring Valley	Cans, plastic, scrap metal	5 tons daily 3600-4200 tons annually
12	Liberty Recycling	Del Mar	Cans, plastic bottles, newspapers, cardboard	
13	American Recycling	El Cajon	Bottles, cans, plastic bottles, copper, scrap aluminum	
14	California Metals Inc. (#1)	El Cajon	Nonferrous metals, electronics	
15	California Metals Inc. (#4)	El Cajon	Nonferrous metals, electronics	
16	M&M Recycling Center	El Cajon		
17	Universal Refuse and Recycling	El Cajon		
18	All Ways Recycling	El Cajon	Bottles, cans, plastic bottles, scrap metals	
19	Genes Recycling	El Cajon		
20	Skyline Recycling Co.	Escondido	Cans, plastic bottles, brass, copper	
21	Escondido Recycling Yard Inc.	Escondido	Bottles, cans, plastic bottles, brass, copper, stainless steel	
22	Quality Recycling (#1)	Lakeside	Bottles, cans, plastic bottles, copper, cardboard, stainless steel	
23	Quality Recycling (#2)	Lakeside	Bottles, cans, plastic bottles, copper, cardboard, stainless steel	
24	Ben Recycling and Scrap Metal	Oceanside	Bottles, cans, plastic bottles, brass, copper, stainless steel, scrap metal	
25	Recycle America	Oceanside	Bottles, can, plastic bottles	
26	Ramona Recycling	Ramona	Bottles, cans, plastic bottles, newspapers, cardboard	
27	Richardson Recycling	Ramona	Bottles, cans, plastic bottles	
28	Allan Co./Sycamore Landfill	Santee	Bottles, cans, plastic bottles, copper, metal, stainless steel	
29	Lees Iron and Metal	Vista	Bottles, cans, plastic bottles, copper, metal, stainless steel	
30	Quality Recycling	Vista	Brass, copper, aluminum, stainless steel, newspapers, paper, cardboard	
31	54th Recycling Center/Jorges Used Tires	San Diego		
32	AB Recycling	San Diego		
33	American Recycling	San Diego	Bottles, cans, plastic bottles	
34	Southwest Recycling	San Diego		
35	TOMRA Pacific Inc./San Diego	San Diego	Cans, plastic bottles	
36	Ocean Beach Recycling	San Diego		
37	Leroy Recycling/Old Town Recycling	San Diego	Bottles, cans, plastic bottles, copper, scrap metal	
38	Allan Co.	San Diego	Bottles, cans, plastic bottles, copper	
39	Linda Recycling	San Diego	Bottles, cans, plastic bottles	
40	A to Z Auto Inc.	San Diego	Brass, copper, stainless steel, metal, appliances	
41	All Ways Recycling Co.	San Diego	Bottles, cans, plastic bottles, copper, stainless steel	
42	IMS Recycling Services Inc.	San Diego	Bottles, cans, plastic bottles, brass, copper, stainless steel, wiring	
43	J and R Recycling	San Diego	Bottles, cans, plastic bottles, brass, copper, scrap aluminum, stainless steel	
44	Time Recycling Center	San Diego	Bottles, cans, plastic bottles, copper	
45	AmerMex Recycling Inc.	San Diego		
46	Can Depot Recycling Services	San Diego		
47	Regan Recycling Enterprises	San Diego		
48	Can Depot Recycling Services	San Diego		
49	Allan Co.	San Diego	Bottles, cans, plastic bottles, brass, copper, stainless steel	350 tons daily
50	Palm Ave. Recycling Inc.	San Diego	Bottles, cans, plastic bottles	
51	Save the Planet Recycling Center (#1)	San Diego	Bottles, cans, plastic bottles, copper, scrap metals	
52	Save the Planet Recycling Center (#3)	San Diego	Bottles, cans, plastic bottles, copper, scrap metals	

TABLE 2-9

CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN

PROJECTED CAPACITY WITHOUT SYCAMORE EXPANSION

MSW Declining Capacity Projections by Landfill (2009 Base Volumes)																
Landfill	Borrego			Otay			Ramona			Sycamore Sanitary			Miramar			ENDING CAPACITY
Total Est. Permitted Capacity (cu yds)	706,745			62,377,974			2,200,000			48,124,462			87,760,000			
Remaining Estimated Capacity (cu yds)	478,836 as of 08/31/09			33,070,879 as of 11/30/06			690,000			47,388,428 as of 09/30/06			19,177,564 as of 6/30/10			ENDING CAPACITY
Closure Date	12/31/2040 *Remaining tonnage goes to 50 Sycamore			4/30/2027 *Remaining tonnage goes to 5,830 Sycamore			12/31/2006 *Remaining tonnage goes to 295 Sycamore			12/31/2031			12/31/2011 *Remaining tonnage goes to 8,000 Sycamore			
Permitted Max Disposal (tons/day)	50 Sycamore			5,830 Sycamore			295 Sycamore			3,965			8,000 Sycamore			ENDING CAPACITY
Remaining Capacity (Fiscal Year)	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	
2001	332,792	4,140	328,652	27,216,867	1,088,261	26,128,606	400,200	55,364	344,836	32,879,593	900,502	31,979,091	23,941,514	1,310,118	22,631,396	81,412,580
2002	328,652	4,560	324,091	26,128,606	1,254,892	24,873,714	344,836	70,009	274,827	31,979,091	894,000	31,085,091	22,631,396	1,340,465	21,290,930	77,848,654
2003	324,091	4,705	319,386	24,873,714	1,342,857	23,530,856	274,827	75,944	198,883	31,085,091	889,466	30,195,625	21,290,930	1,381,925	19,909,005	74,153,756
2004	319,386	5,092	314,294	23,530,856	1,420,225	22,110,631	198,883	80,151	118,732	30,195,625	911,356	29,284,269	19,909,005	1,444,695	18,464,310	70,292,236
2005	314,294	5,086	309,208	22,110,631	1,448,166	20,662,466	118,732	74,245	44,488	29,284,269	902,331	28,381,938	18,464,310	1,525,463	16,938,847	66,336,946
2006	309,208	6,632	302,576	20,662,466	1,481,356	19,181,110	44,488	44,488	-	28,381,938	896,650	27,485,288	16,938,847	1,475,919	15,462,928	62,431,901
2007	302,576	8,446	294,130	19,181,110	1,418,691	17,762,419				27,485,288	981,491	26,503,798	15,462,928	1,313,693	14,149,234	58,709,580
2008	294,130	8,677	285,453	17,762,419	1,310,025	16,452,394				26,503,798	988,314	25,515,484	14,149,234	1,160,219	12,989,015	55,242,346
2009	285,453	7,728	277,725	16,452,394	1,277,154	15,175,240				25,515,484	877,828	24,637,656	12,989,015	954,028	12,034,987	52,125,608
2010	277,725	7,388	270,337	15,175,240	1,220,891	13,954,349				24,637,656	839,156	23,798,500	12,034,987	912,000	11,122,987	49,146,173
2011	270,337	7,494	262,843	13,954,349	1,238,476	12,715,873				23,798,500	851,243	22,947,257	11,122,987	986,000	10,136,987	46,062,960
2012	262,843	7,631	255,212	12,715,873	1,261,085	11,454,788				22,947,257	866,783	22,080,474	10,136,987	1,004,000	9,132,987	42,923,461
2013	255,212	7,722	247,490	11,454,788	1,276,158	10,178,630				22,080,474	877,143	21,203,332	9,132,987	1,016,000	8,116,987	39,746,439
2014	247,490	7,730	239,760	10,178,630	1,277,414	8,901,216				21,203,332	878,006	20,325,325	8,116,987	1,017,000	7,099,987	36,566,289
2015	239,760	7,616	232,144	8,901,216	1,258,573	7,642,643				20,325,325	865,056	19,460,269	7,099,987	1,002,000	6,097,987	33,433,044
2016	232,144	7,695	224,449	7,642,643	1,271,648	6,370,995				19,460,269	874,043	18,586,226	6,097,987	1,160,214	4,937,773	30,119,443
2017	224,449	7,774	216,675	6,370,995	1,284,763	5,086,232				18,586,226	883,058	17,703,168	4,937,773	1,170,795	3,766,978	26,773,054
2018	216,675	7,854	208,821	5,086,232	1,297,917	3,788,315				17,703,168	892,098	16,811,070	3,766,978	1,181,379	2,585,599	23,393,805
2019	208,821	7,934	200,888	3,788,315	1,311,089	2,477,226				16,811,070	901,152	15,909,918	2,585,599	1,191,966	1,393,632	19,981,664
2020	200,888	8,013	192,874	2,477,226	1,324,271	1,152,955				15,909,918	910,213	14,999,705	1,393,632	1,203,555	190,078	16,535,612
2021	192,874	8,104	184,770	1,152,955	1,152,955	-				14,999,705	2,132,213	12,867,493	190,078	190,078	-	13,052,263
2022	184,770	8,195	176,575							12,867,493	3,514,280	9,353,212				9,529,787
2023	176,575	8,286	168,289							9,353,212	3,553,393	5,799,819				5,968,107
2024	168,289	8,378	159,911							5,799,819	3,553,302	2,246,517				2,406,428
2025	159,911	8,469	151,442							2,246,517	2,246,517	-				151,442
2026	151,442	8,559	142,883													142,883
2027	142,883	8,649	134,233													134,233
2028	134,233	8,739	125,494													125,494
2029	125,494	8,828	116,666													116,666
2030	116,666	8,916	107,750													107,750
2031	107,750	8,986	98,764													98,764
2032	98,764	9,054	89,710													89,710
2033	89,710	9,122	80,588													80,588
2034	80,588	9,189	71,399													71,399
2035	71,399	9,255	62,145													62,145
2036	62,145	9,319	52,826													52,826
2037	52,826	9,384	43,442													43,442
2038	43,442	9,447	33,995													33,995
2039	33,995	9,510	24,485													24,485
2040	24,485	9,572	14,913													14,913
2041	14,913	9,634	5,279													5,279
2042	5,279	5,279	-													0
2043																0
2044																0
2045																0

NOTE: Conversion factor to convert from cubic yards to tons is 1,160. This rate was obtained from the Joint Technical Document (Volume 1 of 2) West Miramar Landfill San Diego California February 2007, revised February 4, 2008 for all landfills.

Sources: § CIWMB, Active Landfills Profile
 § Quarterly AB 939 CIWMB reports from the County of San Diego
 § San Diego County, Integrated Waste Management Plan, Countywide Siting Element, 2005
 § CIWMB, Disposal Reporting System, Origin of Waste by Landfill
 § ESD tonnage projections and % growth for 2010 - 2015
 § California State Dept of Finance Growth Projections for 2016 - 2045
 § Permitted daily tonnage maximums at Sycamore are:
 2008-3,965, 2009-6,800, 2010-9,000, 2015-10,000, 2020-11,000, 2025-13,000

TABLE 2-10

**CITY OF SAN DIEGO
LONG-TERM MANAGEMENT OPTIONS STRATEGIC PLAN
PROJECTED CAPACITY WITH SYCAMORE EXPANSION
(100% DEPT OF FINANCE)**

MSW Declining Capacity Projections by Landfill (2009 Base Volumes)																
Landfill	Borrego			Otay			Ramona			Sycamore Sanitary			Miramar			System Capacity Total (after all assumed transfers to Sycamore)
Total Est. Permitted Capacity (cu yds)	706,745			62,377,974			2,200,000			48,124,462			87,760,000			
Remaining Estimated Capacity (cu yds)	478,836 as of 08/31/09			33,070,879 as of 11/30/06			690,000			47,388,428			19,177,564 as of 6/30/10			
Closure Date	12/31/2040			4/30/2027			12/31/2006			12/31/2031			12/31/2020			
Permitted Max Disposal (tons/day)	50			5,830			295			3,965			8,000			
Capacity after Expansion (cy yds)	Sycamore			Sycamore			Sycamore			Assume capacity added in 2014			Sycamore			
Remaining Capacity (Fiscal Year)	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	
2001	332,792	4,140	328,652	27,216,867	1,088,261	26,128,606	400,200	55,364	344,836	32,879,593	900,502	31,979,091	23,941,514	1,310,118	22,631,396	81,412,580
2002	328,652	4,560	324,091	26,128,606	1,254,892	24,873,714	344,836	70,009	274,827	31,979,091	894,000	31,085,091	22,631,396	1,340,465	21,290,930	77,848,654
2003	324,091	4,705	319,386	24,873,714	1,342,857	23,530,856	274,827	75,944	198,883	31,085,091	889,466	30,195,625	21,290,930	1,381,925	19,909,005	74,153,756
2004	319,386	5,092	314,294	23,530,856	1,420,225	22,110,631	198,883	80,151	118,732	30,195,625	911,356	29,284,269	19,909,005	1,444,695	18,464,310	70,292,236
2005	314,294	5,086	309,208	22,110,631	1,448,166	20,662,466	118,732	74,245	44,488	29,284,269	902,331	28,381,938	18,464,310	1,525,463	16,938,847	66,336,946
2006	309,208	6,632	302,576	20,662,466	1,481,356	19,181,110	44,488	44,488	-	28,381,938	896,650	27,485,288	16,938,847	1,475,919	15,462,928	62,431,901
2007	302,576	8,446	294,130	19,181,110	1,418,691	17,762,419				27,485,288	981,491	26,503,798	15,462,928	1,313,693	14,149,234	58,709,580
2008	294,130	8,677	285,453	17,762,419	1,310,025	16,452,394				26,503,798	988,314	25,515,484	14,149,234	1,160,219	12,989,015	55,242,346
2009	285,453	7,728	277,725	16,452,394	1,277,154	15,175,240				25,515,484	877,828	24,637,656	12,989,015	954,028	12,034,987	52,125,608
2010	277,725	7,388	270,337	15,175,240	1,220,891	13,954,349				24,637,656	839,156	23,798,500	12,034,987	912,000	11,122,987	49,146,173
2011	270,337	7,494	262,843	13,954,349	1,238,476	12,715,873				23,798,500	851,243	22,947,257	11,122,987	986,000	10,136,987	46,062,960
2012	262,843	7,631	255,212	12,715,873	1,261,085	11,454,788				22,947,257	866,783	22,080,474	10,136,987	1,004,000	9,132,987	42,923,461
2013	255,212	7,722	247,490	11,454,788	1,276,158	10,178,630				22,080,474	877,143	21,203,332	9,132,987	1,016,000	8,116,987	39,746,439
2014	247,490	7,730	239,760	10,178,630	1,277,414	8,901,216				67,603,332	878,006	66,725,325	8,116,987	1,017,000	7,099,987	82,966,289
2015	239,760	7,616	232,144	8,901,216	1,258,573	7,642,643				66,725,325	865,056	65,860,269	7,099,987	1,002,000	6,097,987	79,833,044
2016	232,144	7,695	224,449	7,642,643	1,271,648	6,370,995				65,860,269	874,043	64,986,226	6,097,987	1,160,214	4,937,773	76,519,443
2017	224,449	7,774	216,675	6,370,995	1,284,763	5,086,232				64,986,226	883,058	64,103,168	4,937,773	1,170,795	3,766,978	73,173,054
2018	216,675	7,854	208,821	5,086,232	1,297,917	3,788,315				64,103,168	892,098	63,211,070	3,766,978	1,181,379	2,585,599	69,793,805
2019	208,821	7,934	200,888	3,788,315	1,311,089	2,477,226				63,211,070	901,152	62,309,918	2,585,599	1,191,966	1,393,632	66,381,664
2020	200,888	8,013	192,874	2,477,226	1,324,271	1,152,955				62,309,918	910,213	61,399,705	1,393,632	1,203,555	190,078	62,935,612
2021	192,874	8,104	184,770	1,152,955	1,152,955	-				61,399,705	2,132,213	59,267,493	190,078	190,078	-	59,452,263
2022	184,770	8,195	176,575							59,267,493	3,514,280	55,753,212				55,929,787
2023	176,575	8,286	168,289							55,753,212	3,553,393	52,199,819				52,368,107
2024	168,289	8,378	159,911							52,199,819	3,592,513	48,607,306				48,767,217
2025	159,911	8,469	151,442							48,607,306	3,631,562	44,975,744				45,127,186
2026	151,442	8,559	142,883							44,975,744	3,670,422	41,305,322				41,448,205
2027	142,883	8,649	134,233							41,305,322	3,709,090	37,596,232				37,730,465
2028	134,233	8,739	125,494							37,596,232	3,747,508	33,848,724				33,974,218
2029	125,494	8,828	116,666							33,848,724	3,785,641	30,063,083				30,179,750
2030	116,666	8,916	107,750							30,063,083	3,823,447	26,239,636				26,347,386
2031	107,750	8,986	98,764							26,239,636	3,853,293	22,386,343				22,485,107
2032	98,764	9,054	89,710							22,386,343	3,882,698	18,503,644				18,593,355
2033	89,710	9,122	80,588							18,503,644	3,911,701	14,591,944				14,672,532
2034	80,588	9,189	71,399							14,591,944	3,940,321	10,651,623				10,723,023
2035	71,399	9,319	62,080							10,651,623	3,968,475	6,683,148				6,745,228
2036	62,080	9,319	52,761							6,683,148	3,996,361	2,686,788				2,739,548
2037	52,761	9,384	43,377							2,686,788	2,686,788	-				43,377
2038	43,377	9,447	33,930													33,930
2039	33,930	9,510	24,420													24,420
2040	24,420	9,572	14,848													14,848
2041	14,848	9,634	5,214													5,214
2042	5,214	5,214	-													-
2043																
2044																
2045																

NOTE: Conversion factor to convert from cubic yards to tons is 1,160. This rate was obtained from the Joint Technical Document (Volume 1 of 2) West Miramar Landfill San Diego California February 2007, revised February 4, 2008 for all landfills.

Sources: § CIWMB, Active Landfills Profile
 § Quarterly AB 939 CIWMB reports from the County of San Diego
 § San Diego County, Integrated Waste Management Plan, Countywide Siting Element, 2005
 § CIWMB, Disposal Reporting System, Origin of Waste by Landfill
 § ESD tonnage projections and % growth for 2010 - 2015
 § California State Dept of Finance Growth Projections for 2016 - 2045
 § Permitted daily tonnage maximums at Sycamore are:
 2008-3,965, 2009-6,800, 2010-9,000, 2015-10,000, 2020-11,000, 2025-13,000

TABLE 2-11

**CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN
PROJECTED CAPACITY WITH SYCAMORE EXPANSION
(50% DEPT OF FINANCE)**

MSW Declining Capacity Projections by Landfill (2009 Base Volumes)																
Landfill	Borrego			Otay			Ramona			Sycamore			Miramar			ENDING CAPACITY
Total Est. Permitted Capacity (cu yds)	706,745			62,377,974			2,200,000			48,124,462			87,760,000			
Remaining Estimated Capacity (cu yds)	478,836 as of 08/31/09			33,070,879 as of 11/30/06			690,000			47,388,428 as of 09/30/06			19,177,564 as of 6/30/10			
Closure Date	12/31/2040 *Remaining tonnage goes to			4/30/2027 *Remaining tonnage goes to			12/31/2006 *Remaining tonnage goes to			12/31/2031			12/31/2012 *Remaining tonnage goes to			
Permitted Max Disposal (tons/day)	50 Sycamore			5,830 Sycamore			295 Sycamore			3,965			8,000 Sycamore			
Capacity after Expansion (cy yds)										80,000,000 Assume capacity added in 2014			87,760,000			
Remaining Capacity (Fiscal Year)	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	TOTALS
2001	332,792	4,140	328,652	27,216,867	1,088,261	26,128,606	400,200	55,364	344,836	32,879,593	900,502	31,979,091	23,941,514	1,310,118	22,631,396	81,412,580
2002	328,652	4,560	324,091	26,128,606	1,254,892	24,873,714	344,836	70,009	274,827	31,979,091	894,000	31,085,091	22,631,396	1,340,465	21,290,930	77,848,654
2003	324,091	4,705	319,386	24,873,714	1,342,857	23,530,856	274,827	75,944	198,883	31,085,091	889,466	30,195,625	21,290,930	1,381,925	19,909,005	74,153,756
2004	319,386	5,092	314,294	23,530,856	1,420,225	22,110,631	198,883	80,151	118,732	30,195,625	911,356	29,284,269	19,909,005	1,444,695	18,464,310	70,292,236
2005	314,294	5,086	309,208	22,110,631	1,448,166	20,662,466	118,732	74,245	44,488	29,284,269	902,331	28,381,938	18,464,310	1,525,463	16,938,847	66,336,946
2006	309,208	6,632	302,576	20,662,466	1,481,356	19,181,110	44,488	44,488	-	28,381,938	896,650	27,485,288	16,938,847	1,475,919	15,462,928	62,431,901
2007	302,576	8,446	294,130	19,181,110	1,418,691	17,762,419				27,485,288	981,491	26,503,798	15,462,928	1,313,693	14,149,234	58,709,580
2008	294,130	8,677	285,453	17,762,419	1,310,025	16,452,394				26,503,798	988,314	25,515,484	14,149,234	1,160,219	12,989,015	55,242,346
2009	285,453	7,728	277,725	16,452,394	1,277,154	15,175,240				25,515,484	877,828	24,637,656	12,989,015	954,028	12,034,987	52,125,608
2010	277,725	7,388	270,337	15,175,240	1,220,891	13,954,349				24,637,656	839,156	23,798,500	12,034,987	905,000	11,129,987	49,153,173
2011	270,337	7,441	262,896	13,954,349	1,229,684	12,724,665				23,798,500	845,200	22,953,300	11,129,987	986,000	10,143,987	46,084,849
2012	262,896	7,509	255,387	12,724,665	1,240,908	11,483,758				22,953,300	852,914	22,100,386	10,143,987	995,000	9,148,987	42,988,518
2013	255,387	7,554	247,833	11,483,758	1,248,324	10,235,434				22,100,386	858,012	21,242,375	9,148,987	1,000,946	8,148,041	39,873,683
2014	247,833	7,557	240,276	10,235,434	1,248,938	8,986,496				21,242,375	858,434	20,383,941	8,148,041	1,001,439	7,146,602	36,728,339
2015	240,276	7,502	232,774	8,986,496	1,239,727	7,746,768				20,383,941	852,103	19,531,838	7,146,602	994,054	6,152,549	33,573,315
2016	232,774	7,541	225,234	7,746,768	1,246,167	6,500,601				19,531,838	856,529	18,675,308	6,152,549	1,145,067	5,007,481	30,428,300
2017	225,234	7,580	217,654	6,500,601	1,252,593	5,248,008				18,675,308	860,946	17,814,362	5,007,481	1,150,972	3,856,509	27,271,791
2018	217,654	7,618	210,036	5,248,008	1,259,005	3,989,002				17,814,362	865,353	16,949,009	3,856,509	1,156,864	2,699,645	24,072,146
2019	210,036	7,657	202,378	3,989,002	1,265,394	2,723,608				16,949,009	869,745	16,079,264	2,699,645	1,162,734	1,536,911	20,835,235
2020	202,378	7,696	194,683	2,723,608	1,271,755	1,451,853				16,079,264	874,117	15,205,147	1,536,911	1,168,580	368,331	17,666,756
2021	194,683	7,739	186,944	1,451,853	1,278,962	172,891				15,205,147	1,685,941	13,519,206	368,331	368,331	-	14,513,575
2022	186,944	7,783	179,161	172,891	172,891	-				13,519,206	3,179,066	10,340,140				11,334,100
2023	179,161	7,826	171,335							10,340,140	3,370,610	6,969,530				8,168,920
2024	171,335	7,869	163,466							6,969,530	3,389,163	3,580,367				5,191,204
2025	163,466	7,912	155,554							3,580,367	3,407,583	1,172,784				2,184,784
2026	155,554	7,954	147,600							1,172,784	3,425,815	1,252,970				1,127,000
2027	147,600	7,996	139,604							1,252,970	3,443,860	703,110				400,000
2028	139,604	8,037	131,567							703,110	3,461,695	241,415				150,000
2029	131,567	8,078	123,489							241,415	3,479,308	762,107				50,000
2030	123,489	8,119	115,370							762,107	3,496,681	265,426				0
2031	115,370	8,150	107,220							265,426	3,510,329	755,097				0
2032	107,220	8,181	99,038							755,097	3,523,723	231,374				0
2033	99,038	8,212	90,826							231,374	3,536,883	694,491				0
2034	90,826	8,242	82,584							694,491	3,549,822	144,669				0
2035	82,584	8,272	74,313							144,669	3,562,533	582,136				0
2036	74,313	8,301	66,012							582,136	3,575,021	8,007,115				0
2037	66,012	8,329	57,683							8,007,115	3,587,326	4,419,789				0
2038	57,683	8,357	49,326							4,419,789	3,599,462	820,327				0
2039	49,326	8,385	40,940							820,327	820,327	-				0
2040	40,940	8,413	32,528													32,528
2041	32,528	8,440	24,088													24,088
2042	24,088	8,466	15,622													15,622
2043	15,622	8,493	7,129													7,129
2044	7,129	7,129	-													-
2045																

NOTE: Conversion factor to convert from cubic yards to tons is 1,160. This rate was obtained from the Joint Technical Document (Volume 1 of 2) West Miramar Landfill San Diego California February 2007, revised February 4, 2008 for all landfills.

TABLE 2-12

**CITY OF SAN DIEGO
LONG-TERM MANAGEMENT OPTIONS STRATEGIC PLAN
PROJECTED CAPACITY WITH SYCAMORE EXPANSION
(150% DEPT OF FINANCE)**

MSW Declining Capacity Projections by Landfill (2009 Base Volumes)																
Landfill	Borrego			Otay			Ramona			Sycamore Sanitary			Miramar			ENDING CAPACITY
Total Est. Permitted Capacity (cu yds)	706,745			62,377,974			2,200,000			48,124,462			87,760,000			
Remaining Estimated Capacity (cu yds)	478,836 as of 08/31/09			33,070,879 as of 11/30/06			690,000			47,388,428			19,177,564 as of 6/30/10			CAPACITY
Closure Date	12/31/2040			4/30/2027			12/31/2006			12/31/2031			12/31/2012			
Permitted Max Disposal (tons/day)	50			5,830			295			3,965			8,000			CAPACITY
Capacity after Expansion (cy yds)	Sycamore			Sycamore			Sycamore			Assume capacity added in 2014			Sycamore			
Remaining Capacity (Fiscal Year)	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	Beginning Capacity	Annual Disposal Tons	Ending Capacity	TOTALS
2001	332,792	4,140	328,652	27,216,867	1,088,261	26,128,606	400,200	55,364	344,836	32,879,593	900,502	31,979,091	23,941,514	1,310,118	22,631,396	81,412,580
2002	328,652	4,560	324,091	26,128,606	1,254,892	24,873,714	344,836	70,009	274,827	31,979,091	894,000	31,085,091	22,631,396	1,340,465	21,290,930	77,848,654
2003	324,091	4,705	319,386	24,873,714	1,342,857	23,530,856	274,827	75,944	198,883	31,085,091	889,466	30,195,625	21,290,930	1,381,925	19,909,005	74,153,756
2004	319,386	5,092	314,294	23,530,856	1,420,225	22,110,631	198,883	80,151	118,732	30,195,625	911,356	29,284,269	19,909,005	1,444,695	18,464,310	70,292,236
2005	314,294	5,086	309,208	22,110,631	1,448,166	20,662,466	118,732	74,245	44,488	29,284,269	902,331	28,381,938	18,464,310	1,525,463	16,938,847	66,336,946
2006	309,208	6,632	302,576	20,662,466	1,481,356	19,181,110	44,488	44,488	-	28,381,938	896,650	27,485,288	16,938,847	1,475,919	15,462,928	62,431,901
2007	302,576	8,446	294,130	19,181,110	1,418,691	17,762,419				27,485,288	981,491	26,503,798	15,462,928	1,313,693	14,149,234	58,709,580
2008	294,130	8,677	285,453	17,762,419	1,310,025	16,452,394				26,503,798	988,314	25,515,484	14,149,234	1,160,219	12,989,015	55,242,346
2009	285,453	7,728	277,725	16,452,394	1,277,154	15,175,240				25,515,484	877,828	24,637,656	12,989,015	954,028	12,034,987	52,125,608
2010	277,725	7,388	270,337	15,175,240	1,220,891	13,954,349				24,637,656	839,156	23,798,500	12,034,987	905,000	11,129,987	49,153,173
2011	270,337	7,547	262,790	13,954,349	1,247,268	12,707,081				23,798,500	857,286	22,941,214	11,129,987	986,000	10,143,987	46,055,071
2012	262,790	7,754	255,036	12,707,081	1,281,423	11,425,658				22,941,214	880,762	22,060,452	10,143,987	1,013,000	9,130,987	42,872,133
2013	255,036	7,893	247,143	11,425,658	1,304,397	10,121,261				22,060,452	896,552	21,163,900	9,130,987	1,031,161	8,099,826	39,632,130
2014	247,143	7,905	239,238	10,121,261	1,306,322	8,814,939				67,563,900	897,876	66,666,024	8,099,826	1,032,684	7,067,142	82,787,343
2015	239,238	7,730	231,508	8,814,939	1,277,421	7,537,518				66,666,024	878,011	65,788,013	7,067,142	1,009,837	6,057,305	79,614,344
2016	231,508	7,850	223,658	7,537,518	1,297,328	6,240,190				65,788,013	891,694	64,896,319	6,057,305	1,175,018	4,882,288	76,242,454
2017	223,658	7,972	215,686	6,240,190	1,317,398	4,922,792				64,896,319	905,488	63,990,831	4,882,288	1,193,196	3,689,092	72,818,401
2018	215,686	8,094	207,592	4,922,792	1,337,629	3,585,163				63,990,831	919,394	63,071,437	3,689,092	1,211,520	2,477,572	69,341,764
2019	207,592	8,217	199,374	3,585,163	1,357,992	2,227,170				63,071,437	933,390	62,138,047	2,477,572	1,229,963	1,247,610	65,812,202
2020	199,374	8,341	191,033	2,227,170	1,378,473	848,698				62,138,047	948,370	61,189,677	1,247,610	1,247,610	-	62,229,408
2021	191,033	8,483	182,550	848,698	848,698	-				61,189,677	2,786,523	58,403,154				58,585,704
2022	182,550	8,626	173,924							58,403,154	3,696,475	54,706,680				54,880,604
2023	173,924	8,770	165,154							54,706,680	3,758,185	50,948,494				51,113,648
2024	165,154	8,915	156,239							50,948,494	3,820,246	47,128,248				47,284,487
2025	156,239	9,060	147,179							47,128,248	3,882,534	43,245,714				43,392,892
2026	147,179	9,206	137,973							43,245,714	3,944,853	39,300,861				39,438,834
2027	137,973	9,351	128,622							39,300,861	4,007,190	35,293,671				35,422,292
2028	128,622	9,496	119,126							35,293,671	4,069,449	31,224,222				31,343,347
2029	119,126	9,641	109,484							31,224,222	4,131,562	27,092,659				27,202,144
2030	109,484	9,786	99,698							27,092,659	4,193,454	22,899,206				22,998,904
2031	99,698	9,900	89,798							22,899,206	4,242,555	18,656,650				18,746,448
2032	89,798	10,014	79,784							18,656,650	4,291,119	14,365,532				14,445,316
2033	79,784	10,126	69,658							14,365,532	4,339,198	10,026,334				10,095,992
2034	69,658	10,237	59,421							10,026,334	4,386,820	5,639,514				5,698,935
2035	59,421	10,347	49,074							5,639,514	4,433,945	1,205,568				1,254,643
2036	49,074	10,456	38,618							1,205,568	1,205,568	-				38,618
2037	38,618	10,564	28,055													28,055
2038	28,055	10,671	17,384													17,384
2039	17,384	10,777	6,606													6,606
2040	6,606	6,606	-													-
2041																
2042																
2043																
2044																
2045																

NOTE: Conversion factor to convert from cubic yards to tons is 1,160. This rate was obtained from the Joint Technical Document (Volume 1 of 2) West Miramar Landfill San Diego California February 2007, revised February 4, 2008 for all landfills.

- Sources: § CIWMB, Active Landfills Profile
- § Quarterly AB 939 CIWMB reports from the County of San Diego
- § San Diego County, Integrated Waste Management Plan, Countywide Siting Element, 2005
- § CIWMB, Disposal Reporting System, Origin of Waste by Landfill
- § ESD tonnage projections and % growth for 2010 - 2015
- § California State Dept of Finance Growth Projections for 2016 - 2045
- § Permitted daily tonnage maximums at Sycamore are:

TABLE 3-1

**CITY OF SAN DIEGO
LONG-TERM RESOURCES MANAGEMENT OPTIONS STRATEGIC PLAN**

RESOURCE MANAGEMENT OPTIONS RECOMMENDED FOR PHASE II EVALUATION

ZERO WASTE PROGRAMS AND POLICIES		
No.	Code	Description
1	ZW-SR-2	Implement rigid plastic recycling at curbside*.
2	ZW-SR-3	Ban single use polystyrene food containers*.
3	ZW-SR-9	Extended Producer/Manufacturer Responsibility.
4	ZW-RU-3	Recycle plastic bags using blue bins.
5	ZW-RY-2	Establish future "MRF First" - MSW to be processed through a MRF if available.
6	ZW-OD-1	Increase greenwaste pickup from bi-weekly to weekly.
7	ZW-OD-2	Create a cost incentive for business participation in a food disards program as markets become available.
8	ZW-OD-4	Establish restaurant food waste collection and composting requirements as markets become available*.
9	ZW-SR-5	Provide business tax credits/incentives for certified Green Businesses.
10	ZW-SR-7	City Procurement Policy - Return usable shipping containers*.
11	ZW-RY-7	Establish on-call bulky item pick-up for single, multi-family, and businesses.
12	ZW-ED-1	Develop/promote e-newsletters to schools*.
13	ZW-ED-2	Educate Restaurants about source reduction.
14	ZW-ED-5	Establish Re-Create Art Contest and Exhibition for youth*.
15	ZW-RY-4	Coordinate large retailer drop-off locations for specific wastes.
16	ZW-OD-9	Allow inclusion of certain residential food waste in the green can (bi-weekly).
* City already implementing or has piloted.		

**TABLE 3-1
(CONTINUED)**

**CITY OF SAN DIEGO
LONG-TERM RESOURCES MANAGEMENT OPTIONS STRATEGIC PLAN**

RESOURCE MANAGEMENT OPTIONS RECOMMENDED FOR PHASE II EVALUATION

INFRASTRUCTURE		
No.	Code	Description
1	ZWI-1	Household Hazardous Waste Collection Center*
2	ZWI-2	Material Recovery Facilities – Curbside*
3	LO1	Compaction*
4	LO2	Alternative Daily Cover – Tarp-o-matic*
5	DIN1	Miramar Height Increase* (0 miles)
6	DIN2	Sycamore Landfill (8 miles)
7	ZWI-4	Greenwaste Facilities*
8	ZWI-5	Construction & Demolition Facilities
9	CT1	Gasification & Pyrolysis
10	LO3	Landfill Reclamation of North Miramar
11	DIN3	Otay Landfill (20 miles)
12	ZWI-3	Material Recovery Facilities - Commercial
13	ZWI-6	Transfer Facilities
14	ZWI-7	Resource Recovery Parks (RRP) - Industrial
15	ZWI-8	Resource Recovery Parks - Community (Convenience drop-off)
16	CT2	Anaerobic Digestion
17	LO4	Alternative Daily Cover-Computer Aided Earth Moving System
18	DOUT1	El Sobrante Landfill (82 miles)
19	CT3	Hydrolysis
20	CT4	Mechanical Processing (Autoclave)
21	CT5	Chemical Processing (Depolymerization)
22	WTE1	500-tpd or less Mass-Burn Municipal Waste Combustor
23	DOUT2	Prima Deshecha Landfill (62 miles)
24	DOUT3	Frank R. Bowerman Landfill (78 miles)
* City already implementing or has piloted.		

TABLE 3-2

**CITY OF SAN DIEGO
LONG-TERM RESOURCES MANAGEMENT OPTIONS STRATEGIC PLAN**

ZERO WASTE PROGRAMS/IDEAS

No.	* ID #	ZERO WASTE PROGRAM	EXPECTED DIVERSION (Tons/Year)	CAPITAL COST (\$)/START DATE (YEAR)	PROGRAM COST (\$/Year)
1	ZW-SR-2	Implement Rigid Plastic Recycling at Curbside.	1,500 to 2,500		No Cost to City
2	ZW-SR-3	Ban Single Use Polystyrene Food Containers.	Unknown		No Cost City
3	ZW-SR-9	Extended Producer/Manufacturer Responsibility.	Unknown		Unknown
4	ZW-RU-3	Recycle Plastic Bags Using Blue Bins.	2,000 to 3,000		75,000 to 150,000
5	ZW-RY-2	Establish Future “MRF First” – MSW To Be Processed Through a MRF if Available.	Low-Diversion	High Cost	High Cost
6*	ZW-OD-1	Increase Green Waste Pickup From Bi-Weekly to Weekly.	31,000 Not Included in Financial Model	3,500,000 Not Included in Financial Model	5,600,000 Not Included in Financial Model
		Expansion of Green Waste Collection Services and Conversion from Manual Collection to Automated Collection	16,800	14,800,000 (18,300,000 assumed in Financial Model)	450,000
7	ZW-OD-2	Create a Cost Incentive for Business Participation in a Food Discards Program as Markets Become Available.	40,000		Fees charged will cover cost
8	ZW-OD-4	Establish Restaurant Food Waste Collection and Composting Requirements as Markets Become Available.	See No. 7		See No. 7
9	ZW-SR-5	Provide Business Tax Credits/Incentives for Certified Green Businesses.	Unknown		Unknown
10	ZW-SR-7	City Procurement Policy – Return Usable Shipping Containers.	Unknown		Unknown
11	ZW-RY-7	Establish On-Call Bulky Item Pick-Up for Single, Multi-Family, and Businesses.	Unknown		Unknown
12	ZW-ED-1	Develop/Promote E-Newsletters to Schools. (Education)	Unknown		Unknown
13	ZW-ED-2	Educate Restaurants About Source Reduction. (Education)	Unknown		Unknown
14	ZW-ED-5	Establish Re-Creat Art Contest and Exhibition for Youth.	Unknown		\$1,800
15	ZW-RY-4	Coordinate Large Retailer Drop-Off Locations for Specific Wastes.	Unknown		Unknown
16	ZW-OD-9	Allow Inclusion of Certain Residential Food Waste in the Green Can (Bi-Weekly).	Unknown		Unknown

TABLE 3-2

**CITY OF SAN DIEGO
LONG-TERM RESOURCES MANAGEMENT OPTIONS STRATEGIC PLAN**

ZERO WASTE PROGRAMS/IDEAS

ESD ONGOING PROGRAMS AND PROPOSED INITIATIVES

No.	ID #	ZERO WASTE PROGRAM AND PROPOSED INITIATIVES	EXPECTED DIVERSION (Tons/Year)	CAPITAL COST (\$)/START DATE (YEAR)	PROGRAM COST (\$/Year)
		"Stand for Less"*	Unknown		Unknown
		Miramar Resource Recovery Center	50,000	6.1 Million	960,000

* ID# Legend:

ZW = Zero Waste

SR = Source Reduction

RU = ReUse

RY = Recycling

OD = Organic Diversion

ED = Education

TABLE 3-3

CITY OF SAN DIEGO LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN

THROUGHPUT ANALYSIS FOR THE MIRAMAR TRANSFER STATION at 5,000 Tons Per Day (tpd) Peak

The purpose of the following calculations is to determine the design capacity of the facility taking into account the number of unloading and loading bays, truck capacities, and storage pile volumes.

HOURS OF OPERATION

Assumption: Monday through Sunday: 7:00 a.m. to 5:00 p.m.
10 hours per day

INCOMING

Municipal Solid Waste (MSW) - (5,400) tpd Peak Incoming (@ 10 hours/day)

Assumption: Average tons per load: 6 tons
Average unloading time: 10 minutes
Number of tipping bays: 15 Total

1 bays x 6 loads/hr x 6 tons/lb = 36 tons/hour

36 tons/hour x 10 hours = 360 tpd/per bay

15 bays x 360 tons/day = 5,400 tpd

Total MSW Material Throughput: 5,400 tpd

INCOMING TIPPING AREA STORAGE PILE

Municipal Solid Waste (MSW)

Storage capacity = 13,500 yd³ - From CADD software calculations using contours denoted on floor plan (see Table 1)

Weight = .18 tons/yd³

13,000 x .18 = **2,500 tons of storage**

OUTGOING

Municipal Solid Waste (MSW) – (5,280) TPD Peak Outgoing (@ 10 hours/day)

Assumption: Average tons per load: 22 tons
Average loading time: 10 minutes
Number of load-out tunnels: 1 Total
1 load-out tunnel x 6 loads/hr x 22 tons/lb = 132 tons/hour

132 tons/hour x 10 hours = 1,320 tons/day (per load-out tunnel)

4 load-out tunnels x 1,320 tons/day = 5,280 tons/day

TRAFFIC VOLUMES

Incoming MSW – (5,000) TPD

Assumption: Average tons per load: 6 tons
Number of incoming trucks: 835 trucks per day

Outgoing MSW

Assumption: Average tons per load: 22 tons
Number of incoming trucks: 227 trucks per day

Total Traffic Volume: 1,062 truck per day

STORAGE REQUIRED

The storage required at maximum incoming throughput would be the total incoming waste and recyclable materials in 10 hours, less the total outgoing waste and recyclable materials in 10 hours; 5,400 tons – 5,280 tons = 120 tons.

There is a storage capacity of approximately 2,500 tons; more than enough to store materials and provide area for maneuverability. The storage space provides a safeguard for unforeseen breakdowns in any of the other parts of the system.

CONCLUSION

From the calculations listed above, the conceptual Transfer Station can operate at **5,000** tpd peak of MSW materials. An increase in throughput at the facility can be achieved by extending the hours of operation.

TABLE 3-4

**CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN**

**MIRAMAR TRANSFER STATION
PRELIMINARY CONSTRUCTION COST ESTIMATE**

Item	Unit	Quantity	Unit Cost	Estimated Cost	Upper Range +10%
I. Design Phase					
Legal / Planning Documents	L.S.	1	\$ 100,000.00	\$ 100,000	
Architectural / Engineering	L.S.	1	\$ 1,652,825.00	\$ 1,652,825	
Solid Waste Facilities Permitting	L.S.	1	\$ 300,000.00	\$ 300,000	
Geotechnical	L.S.	1	\$ 100,000.00	\$ 100,000	
Project Management	L.S.	1	\$ 120,000.00	\$ 120,000	
			Total Design Phase	\$2,272,825	
II. Construction Phase					
Off-site improvements	L.S.	1	\$ 150,000.00	\$ 150,000	
Landscaping	S.F.	30,000	\$ 5.00	\$ 150,000	
Drainage Improvements	L.S.	1	\$ 150,000.00	\$ 150,000	
Sewer Improvements	L.S.	1	\$ 50,000.00	\$ 50,000	
Water Improvements	L.S.	1	\$ 150,000.00	\$ 150,000	
Grading / Pavements	S.F.	375,000	\$ 8.00	\$ 3,000,000	
			Sub-total	\$3,650,000	
Facility Building Costs (installed)					
Transfer Building included Mechanical / Electrical ¹	S.F.	75,000	\$ 135.00	\$ 10,125,000	
Administration/Employee included Mechanical / Electrical	S.F.	8,000	\$ 150.00	\$ 1,200,000	
Maintenance Center included Mechanical / Electrical	S.F.	8,000	\$ 100.00	\$ 800,000	
Steel Push-Wall	L.F.	200	\$ 500.00	\$ 100,000	
Roll-up Doors (Assume 5)	S.F.	2,000	\$ 20.00	\$ 40,000	
Other (specify) - Contractor's OH & Profit	L.S.	5%	\$ 12,265,000.00	\$ 613,250	
			Sub-total	12,878,250	
			Total Construction Phase	\$ 16,528,250	
III. Fixed Equipment					
Scalehouse	S.F.	1,500	\$ 120.00	\$ 180,000	
Load-out Axle Scales	PR.	4	\$ 25,000.00	\$ 100,000	
Scales Systems	L.S.	4	\$ 50,000.00	\$ 200,000	
Support Equipment - Software	L.S.	1	\$ 50,000.00	\$ 50,000	
			Total Fixed Equipment	\$ 530,000	
IV. Other					
Building Permit & Plan Check Fees	L.S.	1	\$ 50,000.00	\$ 50,000	
Local Jurisdiction Inspection	L.S.	1	\$ 150,000.00	\$ 150,000	
Developer Fee	L.S.	1	\$ 200,000.00	\$ 200,000	
Construction Services (A/E)	L.S.	1	\$ 750,000.00	\$ 750,000	
			Total Other	\$ 1,150,000	
SUBTOTAL				\$ 20,481,075	
CONTINGENCY				\$ 4,096,215	
TOTAL CONSTRUCTION COST ESTIMATE (June 2010)				\$ 24,577,290	
Total Estimated Cost				\$25,000,000	\$27,500,000

(1) Does not include space inside the building for alternative technologies.

**Table 3-5
Miramar Transfer Station Development Schedule**

ID	Task Name	Duration	Start	Finish	Year 1												Year 2												Year 3												Year 4												Year 5												Year 6												Ye
					1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
1	PRELIMINARY DESIGN AND NEPA/CEQA PROCESS	42.05 mons	Fri 7/12/13	Fri 9/30/16	[Gantt bar for Preliminary Design and NEPA/CEQA Process]																																																																								
2	Hire Consultant	4 mons	Fri 7/12/13	Thu 10/31/13	[Task bar]																																																																								
3	Determine Regulatory and Environmental Compliance Requirements	6.5 mons	Fri 7/12/13	Thu 1/9/14	[Task bar]																																																																								
4	Prepare Project Description	6 mons	Thu 11/14/13	Wed 4/30/14	[Task bar]																																																																								
5	Pre-Scoping Meetings & Public Outreach Program (e.g. USFWS Consultation)	6.6 mons	Thu 5/1/14	Fri 10/31/14	[Task bar]																																																																								
6	NEPA Notice of Intent to Prepare EIS, CEQA EIR Notice of Preparation	2.15 mons	Mon 11/3/14	Wed 12/31/14	[Task bar]																																																																								
7	NEPA EIS Preparation, CEQA EIR Preparation (1)	10 mons	Mon 11/3/14	Fri 8/7/15	[Task bar]																																																																								
8	Biological Surveys	10 mons	Mon 11/3/14	Fri 8/7/15	[Task bar]																																																																								
9	Environmental Studies (Traffic, Noise, Air Quality) (2)	10 mons	Mon 11/3/14	Fri 8/7/15	[Task bar]																																																																								
10	Draft EIS and EIR Public Review Period	1.6 mons	Mon 8/10/15	Tue 9/22/15	[Task bar]																																																																								
11	Prepare NEPA Record of Decision, CEQA Response to Comments & Final EIR	3.3 mons	Wed 9/23/15	Wed 12/23/15	[Task bar]																																																																								
12	NEPA File Record of Decision, CEQA EIR Certification & File Notice of Determinatio	0.55 mons	Fri 9/16/16	Fri 9/30/16	[Task bar]																																																																								
13																																																																													
14	PERMITS AND APPROVALS	39.55 mons	Thu 5/1/14	Thu 5/11/17	[Gantt bar for Permits and Approvals]																																																																								
15	Hire Permitting Consultant	4.35 mons	Thu 4/9/15	Mon 8/10/15	[Task bar]																																																																								
16	Finding of Conformance	3.3 mons	Fri 11/6/15	Fri 2/5/16	[Task bar]																																																																								
17	City of San Diego Site Development Permit	12 mons	Fri 11/6/15	Thu 10/6/16	[Task bar]																																																																								
18	FAA Clearance - Required for Site Development Permit	9.8 mons	Fri 11/6/15	Fri 8/5/16	[Task bar]																																																																								
19	Transfer Processing Report	13 mons	Fri 7/10/15	Thu 7/7/16	[Task bar]																																																																								
20	Solid Waste Facility Permit Approval	11 mons	Fri 7/8/16	Thu 5/11/17	[Task bar]																																																																								
21	Waste Discharge Requirements Approval	11 mons	Fri 7/8/16	Thu 5/11/17	[Task bar]																																																																								
22	Resource Agency Permit Approvals (as necessary)	26 mons	Thu 5/1/14	Wed 4/27/16	[Task bar]																																																																								
23	NPDES Industrial General Permit	3.2 mons	Fri 7/8/16	Wed 10/5/16	[Task bar]																																																																								
24	Title V Permit	39 mons	Thu 5/1/14	Wed 4/26/17	[Task bar]																																																																								
25																																																																													
26	FINAL DESIGN AND CONSTRUCTION	25.35 mons	Fri 1/20/17	Mon 12/31/18	[Gantt bar for Final Design and Construction]																																																																								
27	Hire Design Consultant	4 mons	Fri 1/20/17	Thu 5/11/17	[Task bar]																																																																								
28	Design/Bid	13 mons	Fri 5/12/17	Thu 5/10/18	[Task bar]																																																																								
29	Construction	8 mons	Tue 5/22/18	Mon 12/31/18	[Task bar]																																																																								

Project: Miramar Exp
Date: Fri 9/7/12

Task Progress Summary External Tasks Deadline

 Split Milestone Project Summary External Milestone

TABLE 3-6

CITY OF SAN DIEGO
LONG-TERM RESOURCES MANAGEMENT OPTIONS STRATEGIC PLAN

NORTH MIRAMAR LANDFILL VERTICAL INCREASE
VOLUME/SITE LIFE CALCULATIONS

Description	Volume – Fill to Permitted Elevation (485 feet AMSL)	Volume – Fill to 40 feet Above Permitted Elevation (525 feet AMSL)
Gross Airspace (CY) ⁽¹⁾	5,790,000	12,910,000
Liner Volume (CY) ⁽³⁾	-1,010,000	-1,010,000
Final Cover Volume (CY) ⁽⁴⁾	-980,000	-990,000
Totals with 6 million CY stockpile		
Existing Stockpiles (CY) ⁽²⁾	6,000,000.00	6,000,000
Totals with Subtitle D Liner		
Total Net Airspace Available (CY)	9,470,000	16,580,000
Total Net Tons (Assume 0.58 tons/CY)⁽⁵⁾	5,490,000	9,620,000
Total Site Life (years)⁽⁶⁾	4.6	8.0
Totals With Interim Cover		
Total Net Airspace Available (CY)	10,490,000⁽⁷⁾	17,600,000
Total Net Tons⁽⁵⁾	6,080,000	10,210,000
Total Site Life (years)⁽⁶⁾	5.1	8.5
Totals with 2.8 million CY stockpile		
Existing Stockpiles (CY) ⁽²⁾	2,800,000.00	2,800,000
Totals with Subtitle D Liner		
Total Net Airspace Available (CY)	6,270,000	13,380,000
Total Net Tons (Assume 0.58 tons/CY)⁽⁵⁾	3,640,000	7,760,000
Total Site Life (years)⁽⁶⁾	3.0	6.5
Totals With Interim Cover		
Total Net Airspace Available (CY)	7,290,000	14,400,000
Total Net Tons⁽⁵⁾	4,230,000	8,350,000
Total Site Life (years)⁽⁶⁾	3.5	7.0

⁽¹⁾ Gross Airspace was calculated by comparing the proposed final grading to the existing topography (2004) using a grid method in AutoCAD.

⁽²⁾ 6 million cubic yards estimated volume from e-mail by Rory Clay dated February 7, 2006. 2.8 million cubic yards estimated volume from previous memorandum dated June 24, 2010.¹

⁽³⁾ Estimate based on 5-foot thick intermediate liner.

⁽⁴⁾ Estimate based on 4-foot thick final cover.

⁽⁵⁾ An airspace utilization factor of 0.58 tons per cubic yard of airspace was used to convert cubic yards to tons based on the Joint Technical Document (Volume 1 of 2) West Miramar Landfill San Diego, California February 2007, revised February 4, 2008.

⁽⁶⁾ Assumes average of 1.2 million tons per year at 2021 based on Hilton, Farnkopf's and Hobson's demand analysis projections.

⁽⁷⁾ The highlighted cell is the assumption used for the financial models.

¹ June 24, 2010, memo Re. City of San Diego, Long-Term Resource Management Options Strategic Plan, North Miramar Landfill Reclamation, to Chris Gonaver, from Christine Arbogast and Burrell McCoy.

TABLE 3-7

**CITY OF SAN DIEGO
LONG-TERM RESOURCES MANAGEMENT OPTIONS STRATEGIC PLAN**

**NORTH MIRAMAR LANDFILL VERTICAL INCREASE
SOIL BALANCE**

	Fill to Permitted Elevation (485 Feet AMSL)		Fill to 40 Feet Above Permitted Elevation (525 Feet AMSL)	
Waste-to-Cover Ratio ⁽¹⁾	4:1		4:1	
Soil Generated from Excavation of Existing Stockpiles (CY)	6,000,000	2,800,000	6,000,000	2,800,000
Soil Balance With Subtitle D Liner				
Total Net Airspace (CY)	9,470,000	6,270,000	16,580,000	13,380,000
Daily and Intermediate Soil Cover (CY)	1,890,000	1,250,000	3,320,000	2,680,000
Soil Required for Landfill Development (CY) (Liner + Final Cover)	2,320,000	2,320,000	2,330,000	2,330,000
Soil Balance With Liner (CY)	1,790,000	-770,000	350,000	-2,210,000
Soil Balance with Interim Cover				
Total Net Airspace (CY)	10,490,000	7,290,000	17,600,000	14,400,000
Daily and Intermediate Soil Cover (CY)	2,100,000	1,460,000	3,520,000	2,880,000
Soil Required for Landfill Development (CY) (1-Foot Thick Interim Liner + Final Cover)	1,300,000	1,300,000	1,310,000	1,310,000
Soil Balance With Interim Cover (CY)	2,600,000	40,000	1,170,000	-1,390,000

⁽¹⁾ From West Miramar Landfill Joint Technical Document, February 4, 2008, page 3-6.

TABLE 3-8

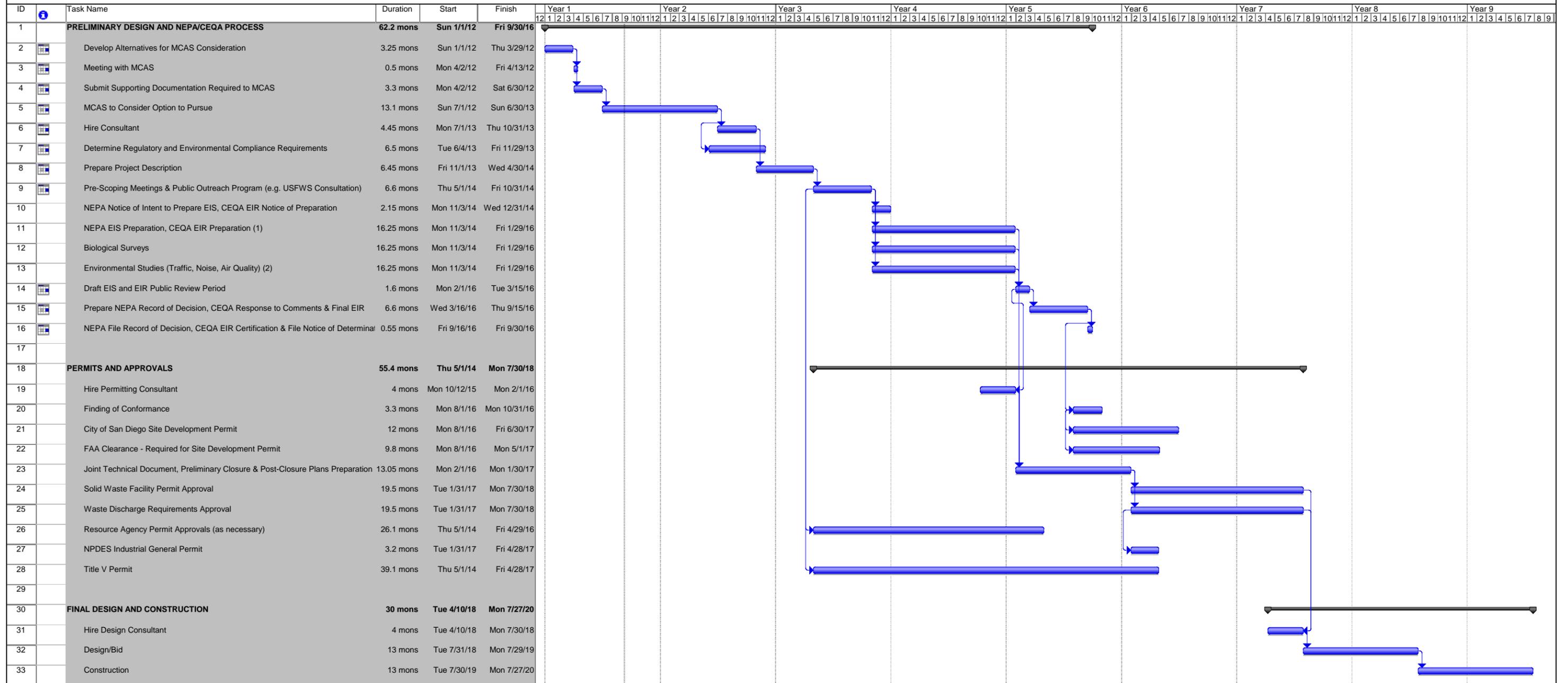
**CITY OF SAN DIEGO
LONG-TERM RESOURCES MANAGEMENT OPTIONS STRATEGIC PLAN
NORTH MIRAMAR LANDFILL VERTICAL INCREASE
SOIL BALANCE**

Fill up to the Permitted Elevation of 485 feet				Cost (Interim Cover)		Cost (liner)	
Description	Quantity	Unit	Unit Cost	(2.8 MCY Stockpile)	(6.0 MCY Stockpile)	(2.8 MCY Stockpile)	(6.0 MCY Stockpile)
Permitting ^{(1), (7)}	1	lump sum (LS)		\$8,420,000	\$8,420,000	\$8,420,000	\$8,420,000
Excavation of Overburden Soil ⁽²⁾	2.8 MCY to 6 MCY	CY	\$2.17	\$6,080,000	\$13,020,000	\$6,080,000	\$13,020,000
Gas Collection and Conveyance System ⁽³⁾	6.2 MCY to 10.5 MCY	CY of airspace	\$0.12	\$870,000	\$1,260,000	\$750,000	\$1,140,000
Design, Construction Management, and Construction Quality Assurance ⁽⁴⁾	1	LS	See (4)	\$130,000	\$220,000	\$1,190,000	\$1,280,000
Liner and Miscellaneous Construction ⁽⁵⁾	151	acre (ac)	\$160,000	-	-	\$24,190,000	\$24,190,000
Contingency 20%				\$3,100,000	\$4,580,000	\$6,610,000	\$9,610,000
Total Development Cost				\$18,600,000	\$27,500,000	\$39,660,000	\$57,660,000
Total Development Cost Per Ton				\$4	\$5	\$11	\$11
Closure Cost ⁽⁶⁾	153	ac	\$105,000	\$19,280,000	\$19,280,000	\$19,280,000	\$19,280,000
Total Cost ⁽⁸⁾				\$37,880,000	\$46,780,000	\$58,940,000	\$76,940,000
Total Cost Per Ton				\$9	\$8	\$16	\$14

Fill an Additional 40 feet Above Permitted Elevation of 485 feet				Cost (Interim Cover)		Cost (liner)	
Description	Quantity	Unit	Unit Cost	(2.8 MCY Stockpile)	(6.0 MCY Stockpile)	(2.8 MCY Stockpile)	(6.0 MCY Stockpile)
Permitting ^{(1), (7)}	1	lump sum (LS)		\$8,420,000	\$8,420,000	\$8,420,000	\$8,420,000
Excavation of Overburden Soil ⁽²⁾	2.8 MCY to 6 MCY	CY	\$2.17	\$6,080,000	\$13,020,000	\$6,080,000	\$13,020,000
Gas Collection and Conveyance System ⁽³⁾	13.4 MCY to 17.6 MCY	CY of airspace	\$0.12	\$1,730,000	\$2,110,000	\$1,610,000	\$1,990,000
Design, Construction Management, and Construction Quality Assurance ⁽⁴⁾	1	LS	See (4)	\$130,000	\$220,000	\$1,190,000	\$1,280,000
Liner and Miscellaneous Construction ⁽⁵⁾	151	acre (ac)	\$160,000	-	-	\$24,190,000	\$24,190,000
Contingency 20%				\$3,270,000	\$4,750,000	\$6,780,000	\$9,780,000
Total Development Cost				\$19,630,000	\$28,520,000	\$40,690,000	\$58,680,000
Total Development Cost Per Ton				\$2	\$3	\$5	\$6
Closure Cost ⁽⁶⁾	154	ac	\$105,000	\$19,390,000	\$19,390,000	\$19,390,000	\$19,390,000
Total Cost				\$39,020,000	\$47,910,000	\$60,080,000	\$78,070,000
Total Cost Per Ton				\$5	\$5	\$8	\$8

- (1) The expansion permitting costs are based on California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA) documentation (\$500,000), JTD (\$150,000) and permitting (\$250,000) assumed for a vertical expansion.
- (2) Excavation of overburden soil cost is from the average of bids for Construction of West Miramar Phase II - Module E, excluding the high and low bid.
- (3) Costs for expansion of the gas collection and conveyance system are based on BAS's experience with designing and constructing systems at other facilities. The cost for WML expansion Alternative A (\$530,000) was converted to a cost per unit of airspace (divided by 4,280,000 CY for WML) then multiplied by the estimated airspace for the NML vertical increase scenarios.
- (4) The cost for a vertical expansion design is assumed at \$50,000 without a liner and \$100,000 with a liner. Liner construction management is assumed to cost \$450,000, and construction quality assurance is assumed to cost \$560,000 with a construction duration of 257 days. Construction management would also be needed for stockpile movement. For a 2.8 MCY stockpile this is estimated to span 70 days and for a 6 MCY stockpile this is estimated to span 150 days. The daily cost is estimated at approximately \$1,120 per day. Stockpile relocation can occur during design if a subtitle D compliant liner were necessary.
- (5) Liner and miscellaneous costs are from the average of bids for Construction of West Miramar Phase II - Module E costs with the excavation costs subtracted.
- (6) Closure costs are based on a cost per acre of final cover. This unit cost originates from Alternative A for WML expansion divided by the final cover area for that option. This cost is based on BAS's experience in preparing closure cost estimates, closure designs and closure construction. A 20 percent contingency was added to these costs.
- (7) Environmental mitigation costs are assumed to include gnatcatcher habitat mitigation costs estimated at \$30,000 per acre for the entire site (250 acres) + \$50,000 per acre for a 2-foot wide "ditch" along the northern and eastern perimeter (7,000 feet) that may be considered a vernal pool. These costs do not include annual gnatcatcher habitat maintenance, which is estimated at \$25,000 (\$100 per acre).
- (8) The amount of \$27,500,000 for development cost and \$20,300,000 for Closure cost were the assumptions used for the financial models.

Table 3-9 North Miramar Landfill Vertical Expansion and West Miramar Lateral Expansion - Alternative A



Project: Miramar Exp
Date: Fri 9/7/12

Task Progress Summary External Tasks Deadline
Split Milestone Project Summary External Milestone

TABLE 3-10

**CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN
WEST MIRAMAR LANDFILL LATERAL EXPANSION ALTERNATIVES
SOIL BALANCE**

Description	Alternative A	Alternative B
Area (acres)	26.0	77.7
Gross Air Space (cy)	4,541,512	21,080,252
Base Liner Volume (cy)	87,702	262,498
Final Cover Volume (cy)	171,187	512,294
Net Airspace (MSW & Daily Cover) (cy)	4,282,622	20,305,460
Waste to Cover Ratio (X:1)	3.0	3.0
Soil Required for Daily Cover (cy)	1,070,656	5,076,365
Soil Required for Landfill Development (cy)	258,890	774,792
Soil Generated from Excavation (cy)	1,018,368	4,844,443
Soil Balance (cy)	(311,177)	(1,006,714)

NOTES

- 1) Area is plan area.
- 2) Gross Airspace calculated by comparing proposed final grading and subgrade grading plans.
- 3) Base Liner volumes were calculated assuming a 2 ft. thick layer placed over the entire base. The area was corrected as needed for the slopes.
- 4) Final Cover volumes were calculated assuming a 4 thick layer placed over the entire final cover area. The area was corrected as needed for the slopes.
- 5) Net Airspace is equal to Gross Airspace minus Base Liner and Final Cover volumes.

**TABLE 3-11
CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN**

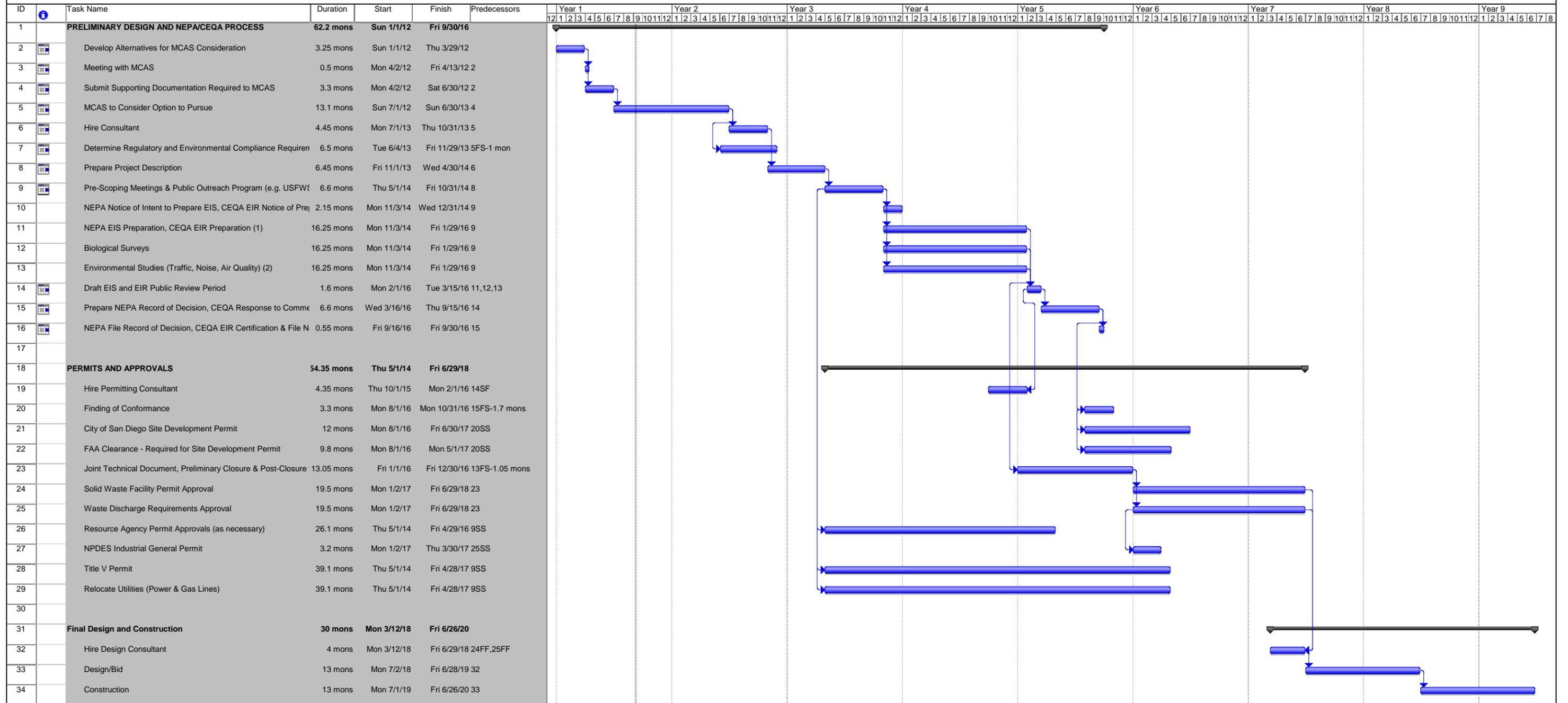
**WEST MIRAMAR LANDFILL LATERAL EXPANSION
EXPANSION ALTERNATIVES DEVELOPMENT COSTS**

Description	Development Costs	
	Alternative A	Alternative B
Net Airspace (cy)	4,282,622	20,305,460
Airspace Utilization Factor (t/cy)	0.55	0.55
Net Airspace (tons)	2,355,442	11,168,003
Development Cost	\$ 6,830,000	\$ 24,340,000
Permitting	\$ 2,300,000	\$ 2,300,000
Infrastructure	\$ 100,000	\$ 100,000
GCCS	\$ 530,000	\$ 1,380,000
Environmental Mitigation	\$ 2,000,000	\$ 3,000,000
Power Line Relocation	\$ -	\$ 5,358,823
Gas Line Relocation	\$ -	\$ -
Miscellaneous	\$ -	\$ -
TOTAL DEVELOPMENT COST	\$ 11,760,000	\$ 36,480,000
Development Amortized Cost (\$/ton)	\$ 4.99	\$ 3.27
Closure Cost	\$ 2,720,000	\$ 8,140,000
SUBTOTAL	\$ 14,480,000	\$ 44,620,000
Contingency 20%	\$ 2,900,000	\$ 8,920,000
TOTAL COST	\$ 17,380,000	\$ 53,540,000
Total Amortized Cost (\$/ton)	\$ 7.38	\$ 4.79

NOTES

- 1) Development Cost based on Module E costs. The per acre cost for Alternative A was \$251,426 and that for Alternative B was \$299,249. The respective unit costs includes design, permitting, CQA, earthworks, liner and miscellaneous work specific to each alternative.
- 2) Expansion permitting costs were assumed to be nearly the same between the two alternatives and are based on estimates provided by ESD in email dated May 20, 2010. The permitting costs do not include CEQA/ NEPA, which is included in the Environmental Mitigation costs.
- 3) Infrastructure costs are assumed to be minimal and include relocation of the existing leachate storage facilities.
- 4) Costs for expansion of the gas collection and conveyance system (GCCS) are based on BAS' experience with designing and constructing GCCS at other facilities.
- 5) Environmental Mitigation costs provided by ESD in an email dated May 20, 2010.
- 6) SDG&E Power Line Relocation costs based on a spreadsheet provided by the California Independent System Operator (CAISO) website.
- 7) Gas Line Relocation costs based on unit costs from Oil&Gas Journal Data Book. 2008 Edition, PennWell, and includes abandoning existing pipelines. Assumed abandonment costs were 25% of new construction costs.
- 8) Closure Costs based on BAS' experience with preparing closure cost estimates, closure designs, and closure construction.
- 9) The AUF was provided by ESD in meeting on May 21, 2010.

Table 3-12 West Miramar Landfill Lateral Expansion - Alternative B



Project: Miramar Exp
Date: Fri 9/7/12

Task: [Blue bar] Progress, [Grey bar] Summary, [Thick grey bar] External Tasks, [Thin grey bar] Deadline, [Green arrow] ↓

Split: [Dotted line] Milestone, [Diamond] Project Summary, [Arrow] External Milestone, [Diamond]

TABLE 3-13

**CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN**

FINAL OPTIONS IDENTIFIED IN PHASE II

No.	Code	Description
1	(ZW) - Zero Waste Programs and Policies	1. 16 Zero Waste Strategies
2	(ZWI) - Zero Waste Infrastructure	1. Resource Recovery Center (Convenience drop-off) 2. Conversion Technology Facility Development Evaluation
3	(T) - Transport	1. Transfer Station 2. In-County <ul style="list-style-type: none"> o Otay Landfill o Sycamore Landfill 3. Out-of-County <ul style="list-style-type: none"> o El Sobrante Landfill
4	(MLCO) - Miramar Landfill Capacity Optimization	1. North Miramar Vertical or West Miramar Vertical 2. West Miramar Lateral (2 Alternatives) 3. Environmental Management Program 4. Comprehensive Operational Review (CORE)

TABLE 4-1

CITY OF SAN DIEGO LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN

EXISTING SYSTEM BASELINE¹ BACKDROP FOR SYSTEM CONFIGURATIONS

Existing City Zero Waste Programs – Over 36 programs

- a. Council Ordinances / Policies / Administrative Regulations
 - Construction and Demolition (C&D) recycling ordinance
 - City recycling ordinance for commercial, multi-family and single-family sectors
 - Recycled Products Procurement (Council Policy 100-14) – Purchase of recycled content products
 - Sustainable Building (Council Policy 900-14) – LEED Silver Certification for new City facilities and fast track permitting for private LEED projects
 - Energy Efficient Products Policy (Council Policy 900-18) – Purchase of Energy Star equipment
 - Energy Conservation and Management (Council Policy 900-02) – Adherence to energy conservation guidelines
 - Environmentally Preferable Purchasing Policy (EP3) – Administrative Regulation

- b. Recycling and Resource Recovery
 - Economic Incentive of \$18 to \$19 per ton for source-separated recycling
 - Operation of Miramar Recycling Center
 - Partnership with Goodwill adjacent to recycling center
 - Salvage operation
 - Non-Profit / Charity Oversight – to encourage reuse, charities allowed free disposal of residue, but must have at least 50 percent diversion

- c. Composting and Expanded Organics Diversion
 - Doubled size of Miramar Greenery composting facility and upgraded permit
 - Effort with commercial sector to maintain food waste composting and partner in zero waste events
 - Foodwaste partnership with Sea World, Petco Park, SDSU, PLNU, Del Mar Fair
 - Backyard Composting bin events
 - Compost Bin Demonstration Gardens in partnership with Zoo, Wild Animal Park, and SeaWorld, and own site at Ridgehaven Green Building

¹ From Phase I LRMOSP report dated December 2008.

- Backyard Composting workshops and informational booths at community events
 - Vermicomposting in schools partnership with Solana Center (siting vermicomposting bins in schools)
 - Master Composter training
 - Christmas tree recycling
 - Bagged compost sales
- d. Outreach and Education
- Waste reduction guide
 - Unwanted mail reduction
 - Holiday Waste Reduction
 - Recycle or Else
 - Other educational initiatives such as environmental workshops, tours, etc.
 - Commercial and multi-family technical assistance and annual award recognition for top waste reduces
 - Commercial and multi-family waste audits
 - Zero Waste Earth Day Event in Balboa Park
 - Support of Zero Waste at San Diego County Fair and Del Mar Fairgrounds
 - Ridgeway Green Building / Xeriscape Demonstration Project
- e. Legislative Initiatives (actively supported at State level)
- Curbside recycling funding
 - E-waste
 - Clopyralid
 - Other initiatives

Processing Facilities –Zero Waste Infrastructure

- Nine (9) Transfer/Material Recovery/C&D Facilities
- Seven (7) Composting Facilities
- 52 Recycling Centers

Disposal Facilities

- Miramar Landfill to 2021
- Sycamore Landfill Expansion
- Otay Landfill
- Gregory Canyon opens 2012
- Orange County ends importation of out-of-county waste in 2015

- Riverside County El Sobrante Landfill permitted for up to 42,000 tons per week of imported waste.

Regulatory /Policy Issues

a. State

- California Integrated Waste Management Act, 1989 (AB 939); and
- AB 737 – Increase Diversion (75% by 2020) – Vetoed by Governor Arnold Schwarzenegger but likely to come back in the near future.

b. Regional

- County of San Diego, Integrated Waste Management Plan, Countywide Siting Element; and

c. Local

- Peoples Ordinance of 1919;
- Proposition H;
- Recycling Ordinance of 2008;
- Construction & Demolition Debris Diversion Deposit Program of 2008;
- City of San Diego Non-Disposal Facility Element (NDFE);
- Miramar Ground Lease between City of San Diego and U.S.A., Department of the Navy; end 2045.
- Miramar Landfill General Development Plan (1993);
- Facilities Franchise Agreement with EDCO Recovery & Transfer Station;
- Facilities Franchise Agreement with San Diego Landfill Systems, Inc., for Sycamore Landfill;
- Non-Exclusive Solid Waste Collection Franchise Agreements; and the
- Fortistar’s landfill gas agreement.

TABLE 4-2

CITY OF SAN DIEGO

LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN

CRITERIA RANKING OF IMPORTANCE

RMAC & ESD STAFF

Name	EVALUATION CRITERIA						Total Score
	Financial Viability	Technical Viability	Regional Viability	Environmental Viability	Capacity Optimization	Sustainability	
RMAC Member 1	15	15	20	20	15	15	100
RMAC Member 2	10	10	0	30	0	50	100
RMAC Member 3	25	30	5	5	15	20	100
RMAC Member 4	10	10	10	20	10	40	100
RMAC Member 5	25	20	10	15	10	20	100
RMAC Member 6	5	5	10	30	20	30	100
RMAC Member 7	18	14	18	18	16	16	100
RMAC Member 8	20	10	10	20	10	30	100
RMAC Member 9	25	20	20	10	5	20	100
RMAC Member 10	10	10	10	30	10	30	100
RMAC Member 11	30	15	15	10	20	10	100
RMAC Member 12	25	25	15	15	10	10	100
ESD Staff 1	20	20	5	15	25	15	100
ESD Staff 2	15	15	0	30	25	15	100
ESD Staff 3	30	10	5	30	20	5	100
AVERAGE	18.867	15.267	10.200	19.867	14.067	21.733	100
ROUNDED	19	15	10	20	14	22	
RANK	3	4	6	2	5	1	
	Financial Viability	Technical Viability	Regional Viability	Environmental Viability	Capacity Optimization	Sustainability	

RANKING

- | | |
|------------------|-------------------------|
| 1 Sustainability | 4 Technical |
| 2 Environmental | 5 Capacity Optimization |
| 3 Financial | 6 Regional |

**Table 5.1
Miramar Landfill Disposal Fees
(Weighed Loads: \$/Ton)**

Hauler Type	Waste Material Point of Origin	Refuse Disposal Tipping Fee¹	Construction and Demolition Tipping Fee²	Refuse Collector Business Tax³	Franchise Fee⁴	AB 939 Fee⁵	Total Refuse Disposal Fee⁶	Total Construction and Demolition Disposal Fee⁷
Residents (less than 2 tons)	City of San Diego	\$30	\$83	-	-	\$10	\$40	\$93
Residents (2 tons or more)	City of San Diego	\$30	\$83	\$8	-	\$10	\$48	\$101
Businesses	City of San Diego	\$30	\$83	\$8	-	\$10	\$48	\$101
Businesses	Outside City Limits	\$36	\$99	\$8	-	\$10	\$54	\$117
City of San Diego	City of San Diego	\$21	\$58	-	-	\$10	\$31	\$68
City of San Diego	Outside City Limits	\$31	\$85	\$8	-	\$10	\$49	\$103
Other Govt. Organizations	City of San Diego	\$26	\$72	-	-	\$10	\$36	\$82
Other Govt. Organizations	Outside City Limits	\$36	\$99	\$8	-	\$10	\$54	\$117
Franchise Hauler (Class I)	City of San Diego	\$26	\$72	-	\$15	\$10	\$51	\$97
Franchise Hauler (Class I)	Outside City Limits	\$36	\$99	\$8	-	\$10	\$54	\$117
Franchise Hauler (Class II)	City of San Diego	\$26	\$72	-	\$16	\$10	\$52	\$98
Franchise Hauler (Class II)	Outside City Limits	\$36	\$99	\$8	-	\$10	\$54	\$117
Flat Rate Transactions ⁸	All	Varies	Varies	\$0 or \$8	-	\$10	Varies	Varies

Table 5.1 Notes:

¹ The Refuse Disposal Tipping Fee is the component of the Total Refuse Disposal Fee that is associated with burying refuse in Miramar Landfill. Revenues from Refuse Disposal Tipping Fees support Refuse Disposal Fund operations.

² The Construction and Demolition (C&D) Tipping Fee is 2.75 x the Refuse Disposal Tipping Fee, and is assessed on all loads designated as C&D loads. Revenues from the C&D Tipping Fee support Refuse Disposal Fund operations.

³ The Refuse Collector Business Tax (RCBT) is a tax assessed on all disposal transactions at Miramar Landfill involving a business (excluding Franchised Haulers with City origin loads), all residential transactions greater than 2 tons, and all transactions involving loads originating outside of City limits. Revenues from the RCBT support General Fund operations.

⁴ The Franchise Fee is the component of the Total Refuse Disposal Fee that is associated with loads hauled by the City's non-exclusive refuse collection franchisees. Revenues from the Franchise Fee support General Fund operations.

⁵ The AB 939 Fee is assessed on all tracked tonnage collected within the City of San Diego, regardless of final disposal destination. It is also assessed on all non-City origin transactions at Miramar Landfill. The revenue from this fee supports Recycling Fund operations.

⁶ Customers hauling refuse loads are assessed the Total Refuse Disposal Fee.

⁷ Customers hauling C&D loads are assessed the Total Construction and Demolition Disposal Fee.

⁸ Flat Rate Transactions are typically associated with smaller loads, such as pickup trucks or vehicles with small trailers, which are not weighed. The fee components of a given Flat Rate Transaction vary depending on the type of vehicle, the point of origin of the material, and whether a given load is being disposed of by a resident, a small business, City forces, or a Franchised Hauler.

**Table 5.2
Financial Analysis Model Key Assumptions**

Assumptions	System Configuration					
	1	2	3	4a	4b	5
1. Miramar Landfill weight based Refuse and Construction & Demolition Tipping fees for Franchise, City Department and Non-Franchise tons remain at current rates through the projected closure date	✓	✓	✓	✓	✓	✓
2. The Flat Rate Refuse Disposal Tipping Fee for Pick-up Trucks increased by \$1 per year through 2045	✓	✓	✓	✓	✓	✓
3. Refuse transaction to ton conversion rate remains at .69 through 2045	✓	✓	✓	✓	✓	✓
4. Used California Department of Finance Population projections for disposed tonnage growth starting in 2016	✓	✓	✓	✓	✓	✓
5. \$1,710,00 in greenery fees beginning in 2010 and adjusted by CPI through 2045	✓	✓	✓	✓	✓	✓
6. \$1,320,000 in interest income. Phased out over 5 years with \$260,000 per year beginning in:	2020	2021	2021	2021	2021	2021
7. Other Revenue - adjusted greenery commodity revenue and city department charges by CPI, remaining revenues stayed constant	✓	✓	✓	✓	✓	✓
8. Revised FY2010 - FY2015 ESD projections to ESD forecast prepared on 08/31/10	✓	✓	✓	✓	✓	✓
9. Annual Inflation Factor of 2.36% for 2016-2045	✓	✓	✓	✓	✓	✓
10. Savings for discontinued landfill operations of \$21M (2010 dollars - adjusted for inflation) beginning in:	2022	2022	2027	2024	2032	2037
11. Waste Management Inc. tonnage continues to come to Miramar through 2045	✓	✓	✓	✓	✓	✓
12. When Miramar closes, assume tonnage taken to Sycamore Landfill and then to El Sobrante (after closure of Sycamore)	✓	✓	✓	✓	✓	✓
13. Fiscal impact of the closure of Miramar to the General Fund is not included in projections	✓	✓	✓	✓	✓	✓
14. Post Closure Fund Balance - Alternative Funding Mechanism - left at \$6,000,000 per year through 2045	✓	✓	✓	✓	✓	✓
15. North County tons to Miramar beginning in 2016, and then to Sycamore when Miramar closes. When Sycamore closes, North County tons are no longer included in the projections	✓	✓	✓	✓	✓	✓
16. Expected start date of Resource Recovery Center	N/A	2014	2014	2014	2014	2014
17. Expected start date of commercial food waste collection	N/A	2014	2014	2014	2014	2014
18. Expected start date of automated green trimmings collection	N/A	2017	2017	2017	2017	2017
19. Expected start date of beginning transfer station permitting process	N/A	2015	2020	2017	2022	2027
20. Expected start date of transfer station operations	N/A	2022	2027	2024	2032	2037
21. Expected start date of N Miramar height expansion	N/A	N/A	2013	N/A	N/A	2013
22. Expected start date of tonnage into N Miramar expansion	N/A	N/A	2022	N/A	N/A	2022
23. Expected start date of W Miramar lateral expansion	N/A	N/A	N/A	2013	2013	2018
24. Expected state date of tonnage into W Miramar lateral expansion	N/A	N/A	N/A	2022	2022	2027
25. Used current tip fees at Sycamore Landfill and El Sobrante Landfill adjusted for inflation	N/A	✓	✓	✓	✓	✓
26. Used the transfer and transport rates per ton determined in Phase I, adjusted for inflation	N/A	✓	✓	✓	✓	✓
27. Adjusted projected RDF and RF savings for inflation through 2045	✓	✓	✓	✓	✓	✓
28. Updated CIP program costs per ESD's schedules	✓	✓	✓	✓	✓	✓
29. Used ESD's estimated costs for automated green trimmings collection, adjusted for inflation	N/A	✓	✓	✓	✓	✓

**Table 5.3
Refuse Disposal Fund
Summary of Key Financial Information**

Refuse Disposal Fund	Configuration 1	Configuration 2	Configuration 3	Configuration 4a	Configuration 4b	Configuration 5
Total Expenditures¹ Cumulative from present through:						
2020	394.4M	\$409.6M	\$422.7M	\$413.0M	\$453.8M	\$440.0M
2030	\$561.3M	\$1.2B	\$1.1B	\$1.2B	\$971.0M	\$1.0B
2045	\$982.8M	\$3.0B	\$3.7B	\$3.9B	\$3.3B	\$3.0B
Total Revenues² Cumulative from present through:						
2020	\$334.6M	\$323.3M	\$321.5M	\$321.5M	\$321.5M	\$321.5M
2030	\$374.1M	\$997.2M	\$816.6M	\$939.0M	\$687.0M	\$690.2M
2045	\$454.1M	\$2.4B	\$3.0B	\$3.3B	\$2.7B	\$2.3B
Total Net Revenue/(Expenditures)^{2,3} Cumulative from present through:						
2020	\$(59.8 M)	\$(86.3M)	\$(101.2M)	\$(91.5M)	\$(132.4M)	\$(118.5M)
2030	\$(187.2M)	\$(232.4M)	\$(294.2M)	\$(238.4M)	\$(284.0M)	\$(324.9M)
2045	\$(528.7M)	\$(622.9M)	\$(684.7M)	\$(628.9M)	\$(676.2M)	\$(731.9M)
Estimated Miramar Closure Date	2021	2021	2027	2023	2031	2036
Estimated Export Out of County Date	2026	2039	2040	2039	2042	2043

Table 5.3 Notes:

¹ Represents all operating and capital costs currently included in the system configuration projections. Also included are the new RDF capital costs associated with anticipated new Zero Waste Programs, which includes a Resource Recovery Center and a commercial food discard program. The majority of the costs are upfront construction/implementation costs so the costs per diverted ton diminish over time. No future replacement costs for the Resource Recovery Center have been included.

² Revenues equal to the cost to process material in a transfer station, and then transport and dispose of the material out of the county have been included in Configurations 2 – 5. These costs and revenues are not applicable to Configuration 1, given the transfer station is not a component of Configuration I.

³ Represents the cumulative net revenues and expenditures for the Refuse Disposal Fund. Included are capital and other expenditures for related operations off-site of Miramar Landfill, such as illegal dump abatements, community clean-ups, street litter container collections, closed landfill/burn sites, department management and administration, etc.

**Table 5.4
Refuse Disposal Fund
Summary of Key Tonnage Information**

Refuse Disposal Fund	Configuration 1	Configuration 2	Configuration 3	Configuration 4a	Configuration 4b	Configuration 5
Waste Quantity (Tons)¹						
Cumulative from present through:						
Disposed						
2020	10,900,000	10,231,000	10,231,000	10,231,000	10,231,000	10,231,000
2030	15,000,000	20,350,000	21,180,000	20,670,000	21,879,000	21,879,000
2045	21,800,000	36,881,000	37,711,000	37,201,000	38,590,000	39,500,000
Diverted (New Programs)						
2020	N/A	720,000	720,000	720,000	720,000	720,000
2030	N/A	2,350,000	2,030,000	2,030,000	2,030,000	2,030,000
2045	N/A	3,900,000	3,900,000	3,900,000	3,900,000	3,900,000
Total Expenditures per Disposed and Diverted Ton						
Cumulative from present through:						
2020	\$ 36	\$ 37	\$ 39	\$ 38	\$ 41	\$ 40
2030	\$ 37	\$ 55	\$ 48	\$ 52	\$ 41	\$ 43
2045	\$ 45	\$ 75	\$ 89	\$ 95	\$ 78	\$ 70
Total Revenue per Disposed and Diverted Ton						
Cumulative from present through:						
2020						
2030	\$ 31	\$ 30	\$ 29	\$ 29	\$ 29	\$ 29
2045	\$ 25	\$ 45	\$ 35	\$ 41	\$ 29	\$ 29
	\$ 21	\$ 59	\$ 73	\$ 79	\$ 62	\$ 53
Net Deficit per Disposed & Diverted Ton						
Cumulative from present through:						
2020	\$ 5	\$ 8	\$ 9	\$ 8	\$ 12	\$ 11
2030	\$ 12	\$ 10	\$ 13	\$ 11	\$ 12	\$ 14
2045	\$ 24	\$ 15	\$ 16	\$ 15	\$ 16	\$ 17
Estimated Miramar Closure Date	2021	2021	2027	2023	2031	2036
Estimated Export Out of County Date	2026	2039	2040	2039	2042	2043

Table 5.4 Notes:

¹ The waste quantity for Configuration 1 includes all tonnages currently directed to Miramar Landfill through the year it is projected to reach full capacity (2021). Thereafter, only the tons disposed of by City departments are included. For Configurations 2 - 5, waste quantities include all tonnages currently directed to West Miramar and those that would continue to go to Miramar Landfill while capacity remains available. Waste material from northern San Diego County that is currently disposed of in Orange County (OC) is assumed to be disposed at Miramar in Configurations 2 - 5 beginning in 2016 when exportation to OC ceases. It is assumed the North County tonnages will be direct hauled via an Oceanside transfer station to Sycamore Landfill once Miramar achieves full capacity. Once Sycamore reaches full capacity, it is assumed the North County tons will be taken to another landfill site out of the county and will not use the proposed Miramar Transfer Station.

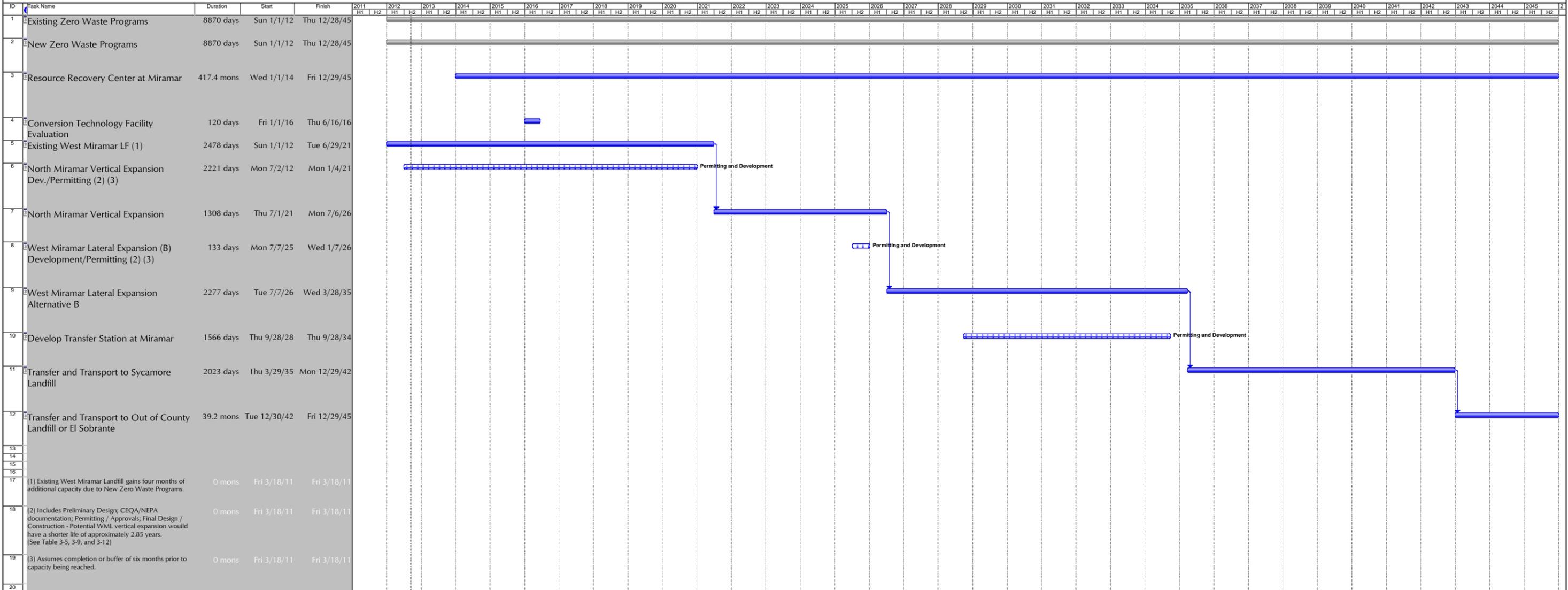
**Table 5.5
Recycling Fund
Summary of Key Financial Information**

Recycling Fund	Configuration 1	Configuration 2	Configuration 3	Configuration 4a	Configuration 4b	Configuration 5
Total Expenditures¹ Cumulative from present through:						
2020	\$192.8M	\$210.3M	\$210.3M	\$210.3M	\$210.3M	\$210.3M
2035	\$430.3M	\$463.7M	\$463.7M	\$463.7M	\$463.7M	\$463.7M
2045	\$934.6M	\$1.0B	\$1.0B	\$1.0B	\$1.0B	\$1.0B
Total Revenues Cumulative from present through:						
2020	\$215.3M	\$215.3M	\$215.0M	\$215.0M	\$215.0M	\$215.0M
2035	\$385.7M	\$423.0M	\$439.9M	\$438.0M	\$464.1M	\$462.4M
2045	\$705.1M	\$761.7M	\$789.5M	\$787.3M	\$817.0M	\$832.3M
Total Net Revenue/(Expenditures) Cumulative from present through:						
2020	\$22.5M	\$4.7M	\$4.7M	\$4.7M	\$4.7M	\$4.7M
2035	\$(44.6M)	\$(40.7M)	\$(23.8M)	\$(26.0M)	\$0.4M	\$(1.3M)
2045	\$(229.5M)	\$(247.5M)	\$(219.7M)	\$(221.9M)	\$(192.2M)	\$(176.9M)

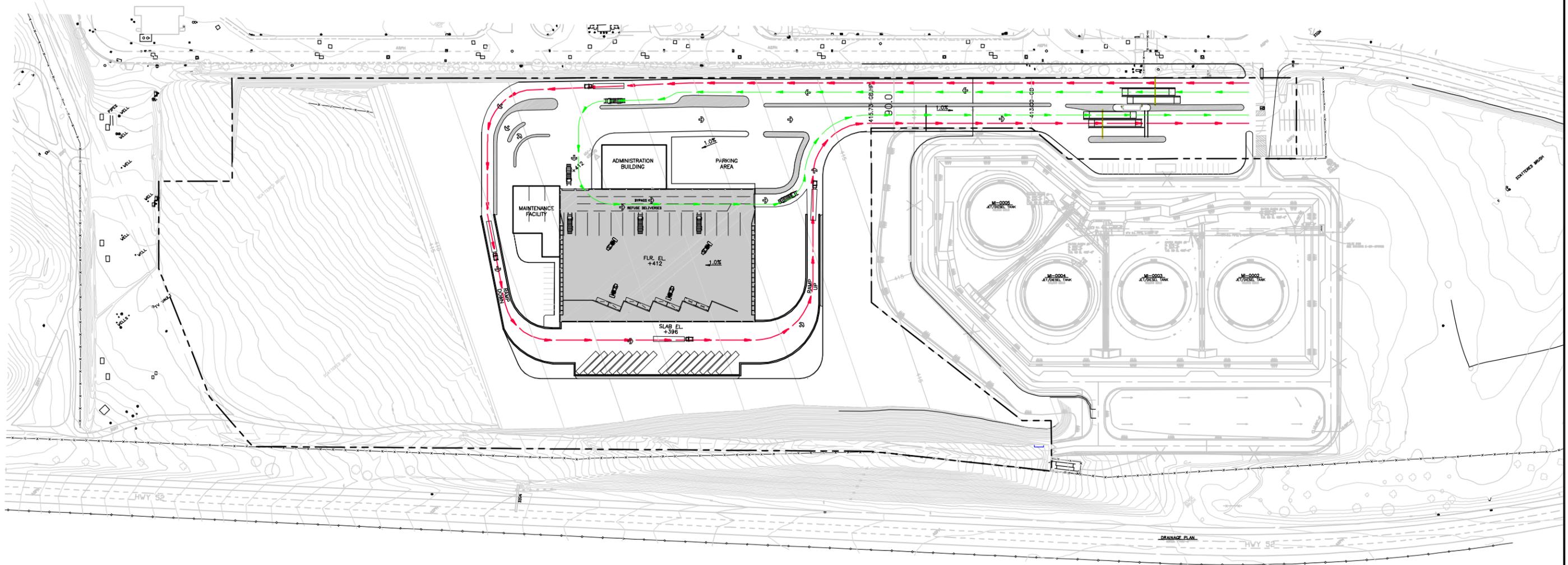
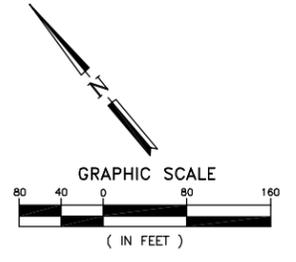
Table 5.5 Notes:

¹ Represents all operating and capital costs currently included in the configuration projections. Also included are the new RF capital costs associated with anticipated new Zero Waste Programs. The new program with the greatest potential fiscal impact is the automation and expansion of green waste collection. It is assumed the green waste collection trucks will be replaced twice and related containers once through 2045. The majority of the costs are upfront implementation costs so the cost per diverted ton diminishes over time.

**TABLE 6-5
CITY OF SAN DIEGO
LONG-TERM RESOURCE MANAGEMENT OPTIONS STRATEGIC PLAN
CONFIGURATION 5 - COMBINATION OF OPTIONS 3 AND 4**



FIGURES



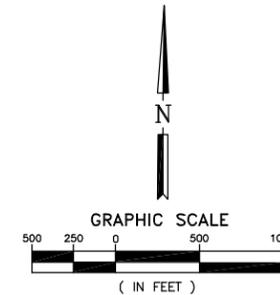
- LEGEND**
- PROPERTY BOUNDARY
 - INCOMING MSW
 - OUTBOUND MSW/TRANSFER

G:\DWG\SANDIEGO\LRMG REPORT\19 REDESIGN\FIGURE 1.DWG 9/7/2012 2:02 PM

NO.	REVISION DESCRIPTION	BY:

BAS
 BRYAN A. STIRRA & ASSOCIATES
 CONSULTING CIVIL & ENVIRONMENTAL ENGINEERS
 1360 E. VALLEY VISTA DRIVE
 DIAMOND BAR, CALIFORNIA 91765
 (909) 860-7777

MIRAMAR TRANSFER STATION		
PRELIMINARY SITE PLAN		
DESIGNED BY : CAL	SCALE : AS SHOWN	FILE NO.: FIGURE 1.DWG
DRAWN BY : CAL	DATE : 7-2011	
CHECKED BY : PW/CMA	DATE : 7-2011	
APPROVED BY : CMA	DATE : 7-2011	FIGURE 3-1



LEGEND

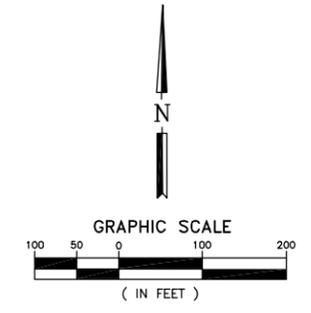
--- APPROXIMATE LIMITS OF FILL

G:\DWG\SANDIEGO\LRMO REPORT\19 REDSIGN\30-0242FIG.DWG 9/7/2012 2:02 PM

NO.	REVISION DESCRIPTION	BY:

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 CONSULTING CIVIL & ENVIRONMENTAL ENGINEERS
 1360 E. VALLEY VISTA DRIVE
 DIAMOND BAR, CALIFORNIA 91765
 (909) 860-7777

MIRAMAR TRANSFER STATION		
MIRAMAR LANDFILLS		
DESIGNED BY : CAL	SCALE : AS SHOWN	
DRAWN BY : CAL	DATE : 7-2011	FILE NO.: 30-0242FIG.DWG
CHECKED BY : PW/CMA	DATE : 7-2011	FIGURE 3-2
APPROVED BY : CMA	DATE : 7-2011	



SITE VOLUME TABLE: UNADJUSTED

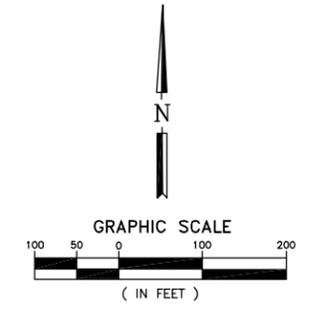
SITE:	----
STRATUM:	VERTICAL INCREASE TO 485' (PERMITTED ELEV.)
SURF1:	2004 TOPO
SURF2:	485' FINAL GRADING
CUT:	417 cu.yds
FILL:	5,789,705 cu.yds
NET:	5,789,288 cu.yds (F)
METHOD:	GRID

G:\DWG\SAN DIEGO\LRNCSF PHASE I\30-0076FIG

NO.	REVISION DESCRIPTION	BY:

BAS
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 DIAMOND BAR, CALIFORNIA 91765
 (909) 860-7777

NORTH MIRAMAR LANDFILL VERTICAL INCREASE TO 485' (PERMITTED ELEV.)		
DESIGNED BY : L.T.	SCALE : AS SHOWN	
DRAWN BY : J.M.L.	DATE : 7-2011	FILE NO.: 30-0076FIG
CHECKED BY : C.M.A.	DATE : 7-2011	FIGURE 3-3
APPROVED BY : C.M.A.	DATE : 7-2011	



SITE VOLUME TABLE: UNADJUSTED

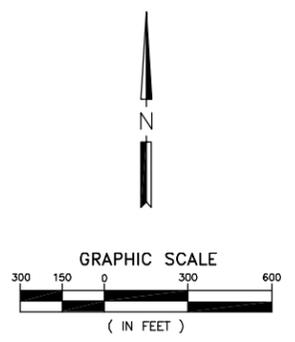
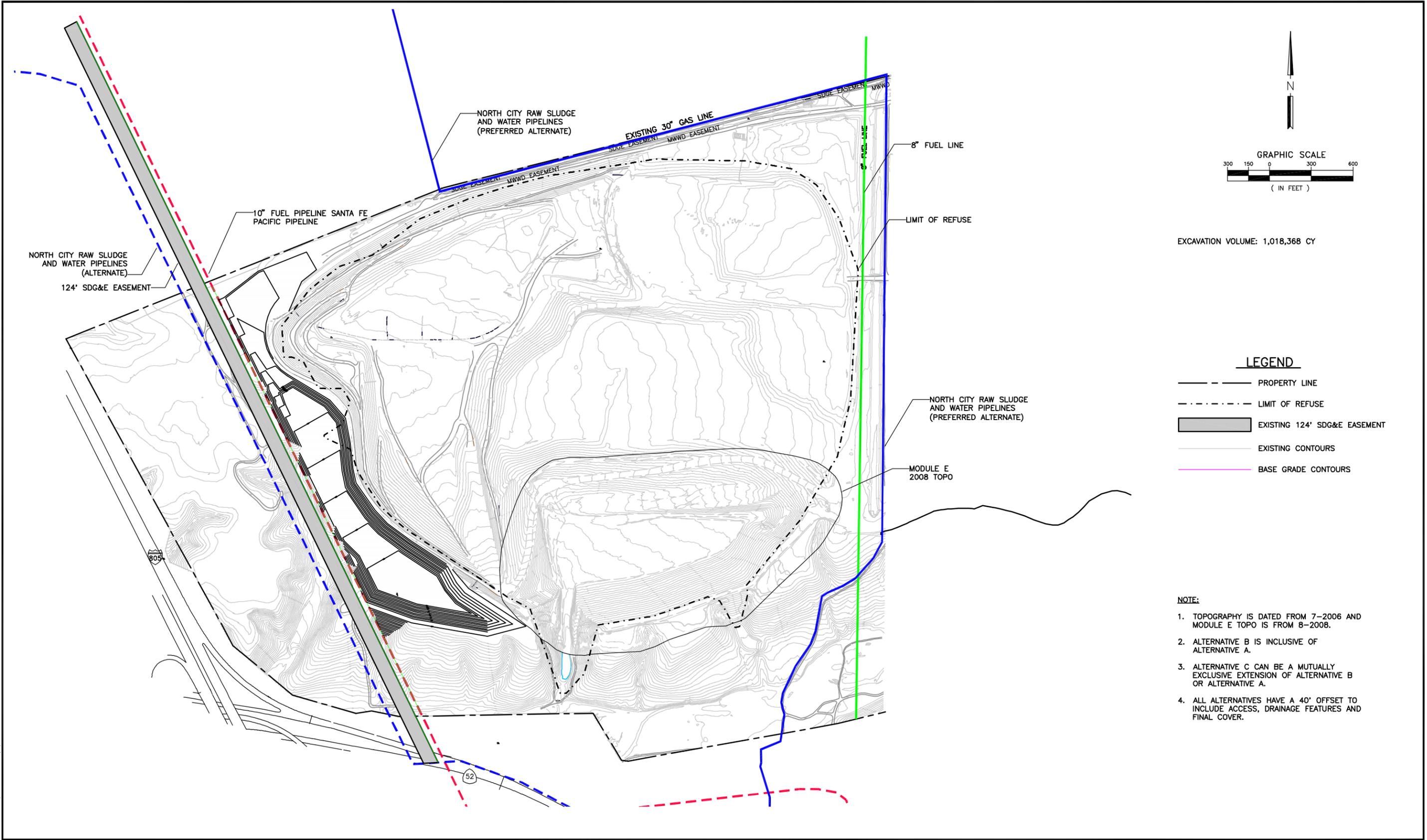
SITE:	----
STRATUM:	40' VERTICAL INCREASE FROM 485' (PERMITTED) TO 525'
SURF1:	2004 TOPO
SURF2:	525' FINAL GRADING
CUT:	0 cu.yds
FILL:	7,117,624 cu.yds
NET:	7,117,624 cu.yds (F)
METHOD:	GRID

G:\DWG\SAN DIEGO\LRNCSF PHASE I\30-0077FIG

NO.	REVISION	DESCRIPTION	BY:

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 DIAMOND BAR, CALIFORNIA 91765
 (909) 860-7777

NORTH MIRAMAR LANDFILL		
40' VERTICAL INCREASE FROM		
485' (PERMITTED) TO 525'		
DESIGNED BY : L.T.	SCALE : AS SHOWN	
DRAWN BY : J.M.L.	DATE : 7-2011	FILE NO.: 30-0077FIG
CHECKED BY : C.M.A.	DATE : 7-2011	FIGURE 3-4
APPROVED BY : C.M.A.	DATE : 7-2011	



EXCAVATION VOLUME: 1,018,368 CY

LEGEND

- — — — — PROPERTY LINE
- - - - - LIMIT OF REFUSE
- █ EXISTING 124' SDG&E EASEMENT
- — — — — EXISTING CONTOURS
- — — — — BASE GRADE CONTOURS

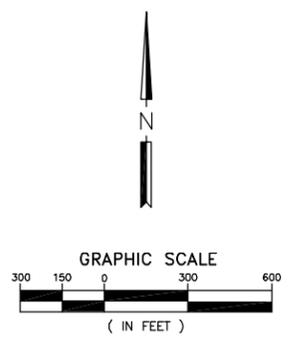
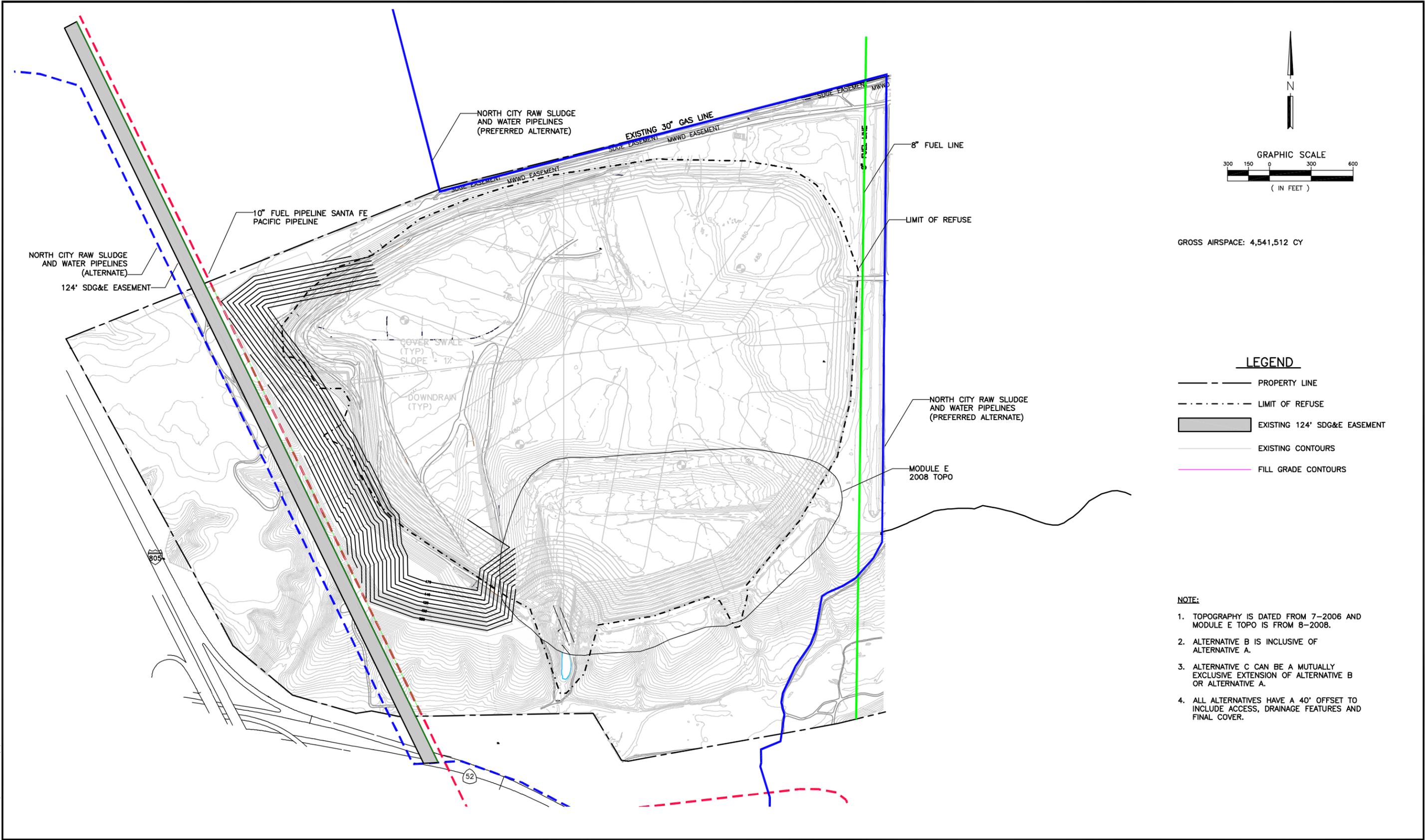
- NOTE:**
1. TOPOGRAPHY IS DATED FROM 7-2006 AND MODULE E TOPO IS FROM 8-2008.
 2. ALTERNATIVE B IS INCLUSIVE OF ALTERNATIVE A.
 3. ALTERNATIVE C CAN BE A MUTUALLY EXCLUSIVE EXTENSION OF ALTERNATIVE B OR ALTERNATIVE A.
 4. ALL ALTERNATIVES HAVE A 40' OFFSET TO INCLUDE ACCESS, DRAINAGE FEATURES AND FINAL COVER.

G:\DWG\MIRAMAR\W MIRAMAR EXPANSION 2010\174054DB.DWG 9/7/2012 2:03 PM

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 DIAMOND BAR, CALIFORNIA 91765
 (909) 860-7777

WEST MIRAMAR LANDFILL		
ALTERNATIVE A BASE GRADING PLAN		
DESIGNED BY :	SCALE : AS SHOWN	
DRAWN BY : J.D.W./D.C.R.	DATE : 7-2011	FILE NO.: 174054DB.DWG
CHECKED BY :	DATE : 7-2011	
APPROVED BY :	DATE : 7-2011	FIGURE 3-5



GROSS AIRSPACE: 4,541,512 CY

LEGEND

- PROPERTY LINE
- - - - - LIMIT OF REFUSE
- █ EXISTING 124' SDG&E EASEMENT
- EXISTING CONTOURS
- FILL GRADE CONTOURS

- NOTE:**
1. TOPOGRAPHY IS DATED FROM 7-2006 AND MODULE E TOPO IS FROM 8-2008.
 2. ALTERNATIVE B IS INCLUSIVE OF ALTERNATIVE A.
 3. ALTERNATIVE C CAN BE A MUTUALLY EXCLUSIVE EXTENSION OF ALTERNATIVE B OR ALTERNATIVE A.
 4. ALL ALTERNATIVES HAVE A 40' OFFSET TO INCLUDE ACCESS, DRAINAGE FEATURES AND FINAL COVER.

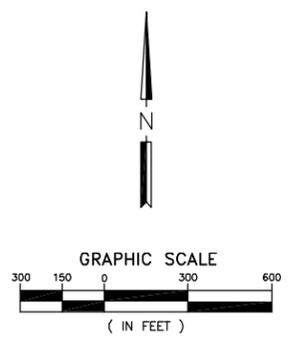
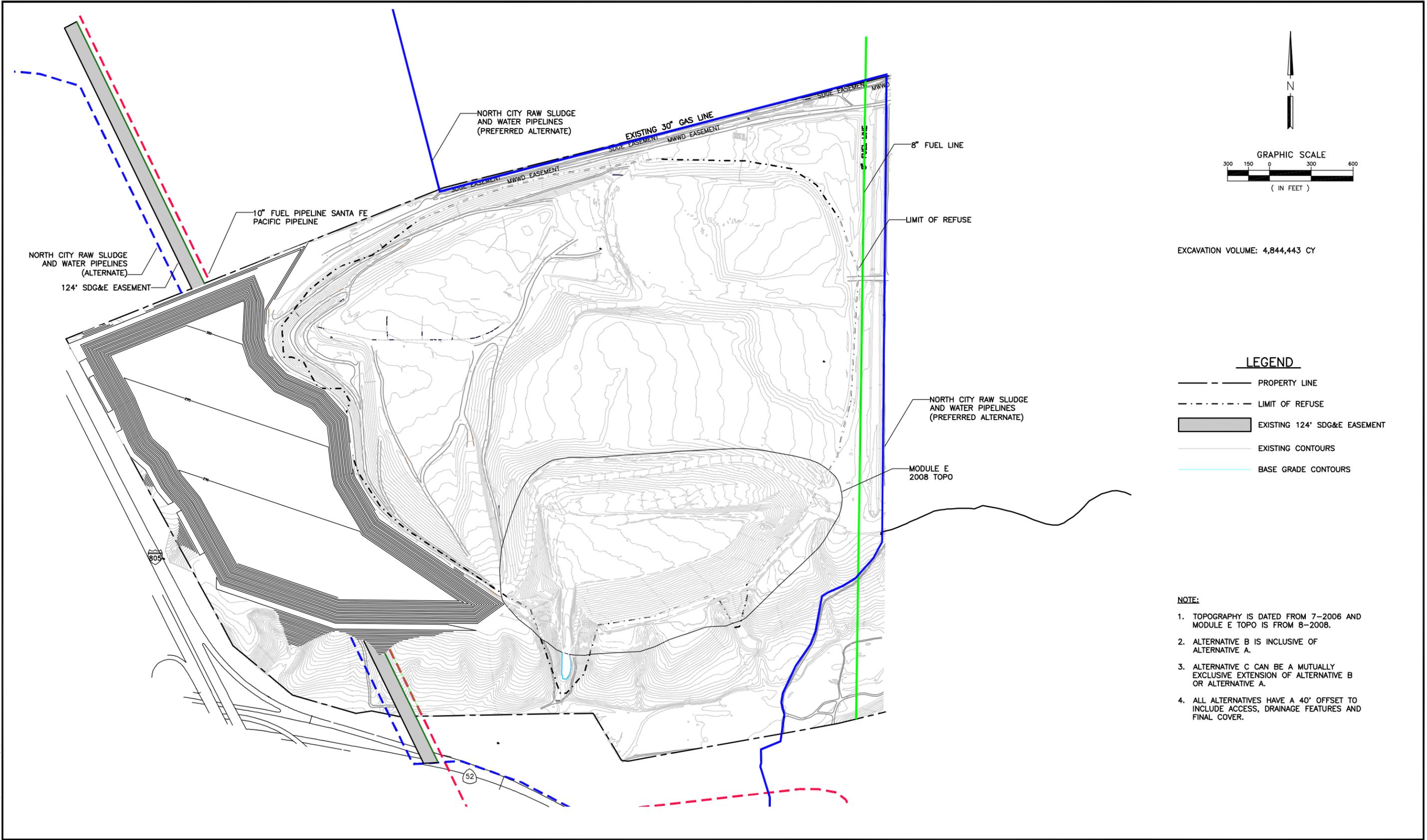
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NO.	REVISION DESCRIPTION	BY:

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 CONSULTING CIVIL & ENVIRONMENTAL ENGINEERS
 1360 E. VALLEY VISTA DRIVE
 DIAMOND BAR, CALIFORNIA 91765
 (909) 860-7777

WEST MIRAMAR LANDFILL		
ALTERNATIVE A FINAL FILL PLAN		
DESIGNED BY :	SCALE : AS SHOWN	
DRAWN BY : J.D.W./D.C.R.	DATE : 7-2011	FILE NO.: 174055DB.DWG
CHECKED BY :	DATE : 7-2011	
APPROVED BY :	DATE : 7-2011	

FIGURE 3-6



EXCAVATION VOLUME: 4,844,443 CY

LEGEND

- — — — — PROPERTY LINE
- - - - - LIMIT OF REFUSE
- █ EXISTING 124' SDG&E EASEMENT
- — — — — EXISTING CONTOURS
- — — — — BASE GRADE CONTOURS

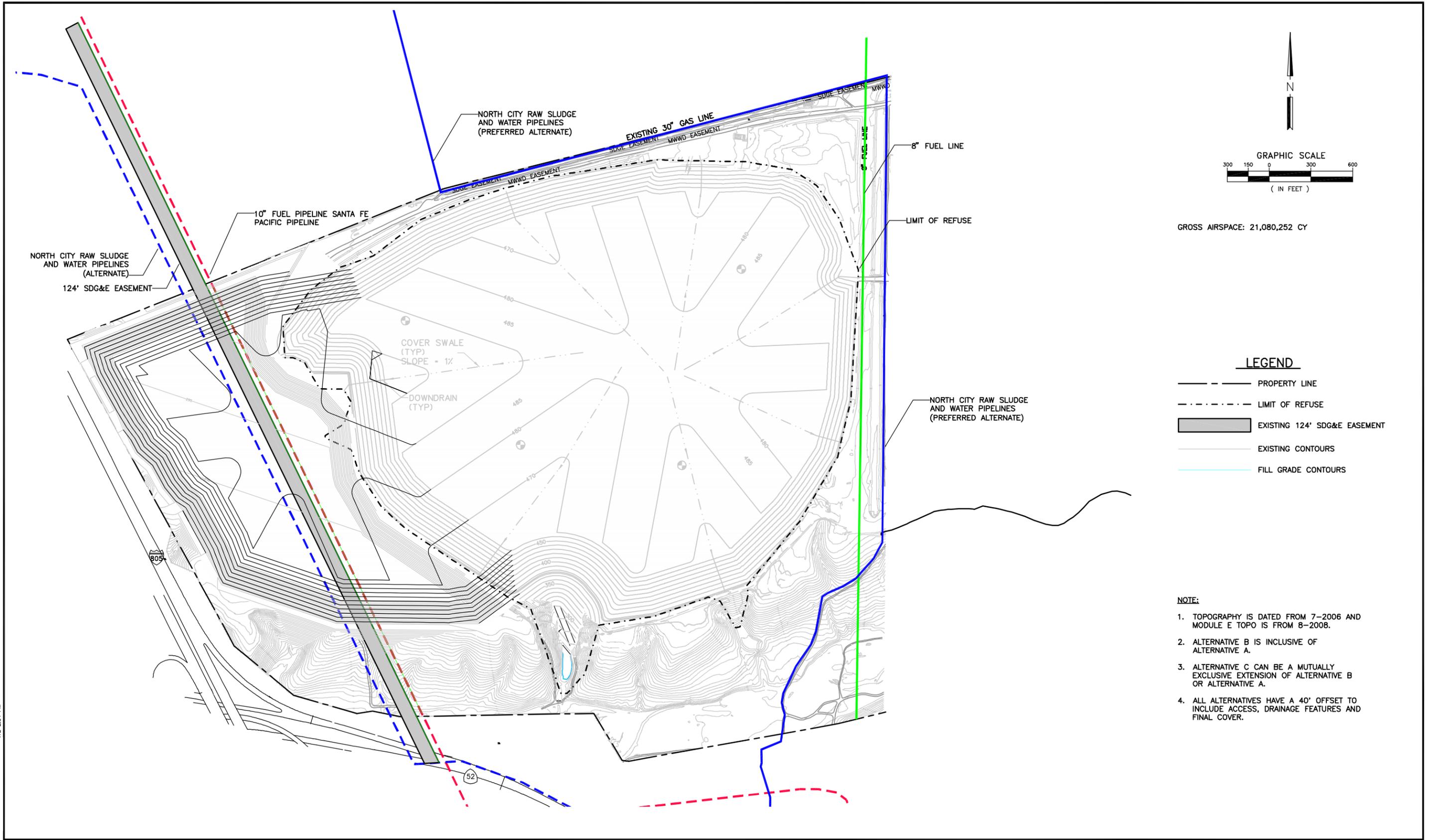
- NOTE:**
1. TOPOGRAPHY IS DATED FROM 7-2006 AND MODULE E TOPO IS FROM 8-2008.
 2. ALTERNATIVE B IS INCLUSIVE OF ALTERNATIVE A.
 3. ALTERNATIVE C CAN BE A MUTUALLY EXCLUSIVE EXTENSION OF ALTERNATIVE B OR ALTERNATIVE A.
 4. ALL ALTERNATIVES HAVE A 40' OFFSET TO INCLUDE ACCESS, DRAINAGE FEATURES AND FINAL COVER.

G:\DWG\MIRAMAR\W MIRAMAR EXPANSION 2010\1740566B.DWG 9/7/2012 2:04 PM

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 CONSULTING CIVIL & ENVIRONMENTAL ENGINEERS
 1360 E. VALLEY VISTA DRIVE
 DIAMOND BAR, CALIFORNIA 91765
 (909) 860-7777

WEST MIRAMAR LANDFILL		
ALTERNATIVE B BASE GRADING PLAN		
DESIGNED BY :	SCALE : AS SHOWN	
DRAWN BY : J.D.W./D.C.R.	DATE : 7-2011	FILE NO.: 1740566B.DWG
CHECKED BY :	DATE : 7-2011	
APPROVED BY :	DATE : 7-2011	FIGURE 3-7



			WEST MIRAMAR LANDFILL		
			ALTERNATIVE B FINAL FILL PLAN		
DESIGNED BY :			SCALE :	AS SHOWN	
DRAWN BY :			DATE :	7-2011	FILE NO.:
CHECKED BY :			DATE :	7-2011	
APPROVED BY :			DATE :	7-2011	
NO. REVISION DESCRIPTION BY:			FIGURE 3-8		